



Small Quantity Hazardous Waste Generator Handbook

How to Reduce, Identify, Store, and
Dispose of Hazardous Waste in Oregon

Updated March 2024



**Oregon Department of Environmental Quality
Hazardous Waste Program**

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Chapter 1

What is hazardous waste?

This chapter will help you understand the definition of hazardous waste and give you the framework to understand hazardous waste regulations.

Hazardous waste can take on many forms. It can be a liquid, solid, semi-solid sludge, or a contained gas. All these wastes have one thing in common: they are potentially dangerous and may harm human health and the environment.

What is RCRA?

RCRA (pronounced “rick ra”) stands for Resource Conservation and Recovery Act. In 1976, the U.S. Congress enacted RCRA to protect public health and the environment from improper waste management. It placed cradle-to-grave responsibilities on facilities that either generate 2,200 pounds or more of hazardous waste per month or store more than 2.2 pounds of acute hazardous waste at the facility at any one time and called these large quantity generators or LQGs. The Hazardous and Solid Waste Amendments were added to RCRA in November 1984. HSWA (pronounced “hiss wa”) created new regulations and a new generator category called a small quantity generator. SQGs are facilities that produce greater than 220 pounds but less than 2,200 pounds of hazardous waste per calendar month.

Congress added yet another category called conditionally exempt small quantity generators. CESQGs later became very small quantity generators, or VSQGs, after the passage of the 2016 federal Hazardous Waste Generator Improvements Rule. VSQGs produce 220 pounds or less of hazardous waste per calendar month. In addition, generators that produce 2.2 pounds or less of acutely hazardous waste or 220 pounds or less of contaminated soil, waste, or debris resulting from the cleanup of an acute hazardous waste spill are VSQGs. VSQGs are exempt from the majority of RCRA regulations if they comply with the requirements in 40 CFR 262.14.

Outlined below are the regulatory requirements that affect small quantity generators. Note that some of the requirements are national requirements, where the federal government requires them. Others are unique to the State of Oregon. These are called Oregon-only or state-only rules and wastes. Generators of hazardous waste are required to follow both federal and state regulations. Where the federal and state regulations do not match, the state regulations take precedence.

RCRA definition of solid waste

The definition of solid waste is broad. Solid waste is any material that is discarded, disposed of, or considered “inherently waste-like.” It is important to note the definition of solid waste is not limited to wastes that are physically solid. RCRA solid wastes are liquid, semi-solid, or contained gas. Any material that is not useable and will be discarded may be defined as solid waste.

The definition of solid waste is in the Code of Federal Regulations at 40 CFR 261.2.

RCRA definition of hazardous waste

All hazardous wastes are solid wastes, but not all solid wastes are hazardous wastes.

RCRA defines hazardous waste as solid waste that may:

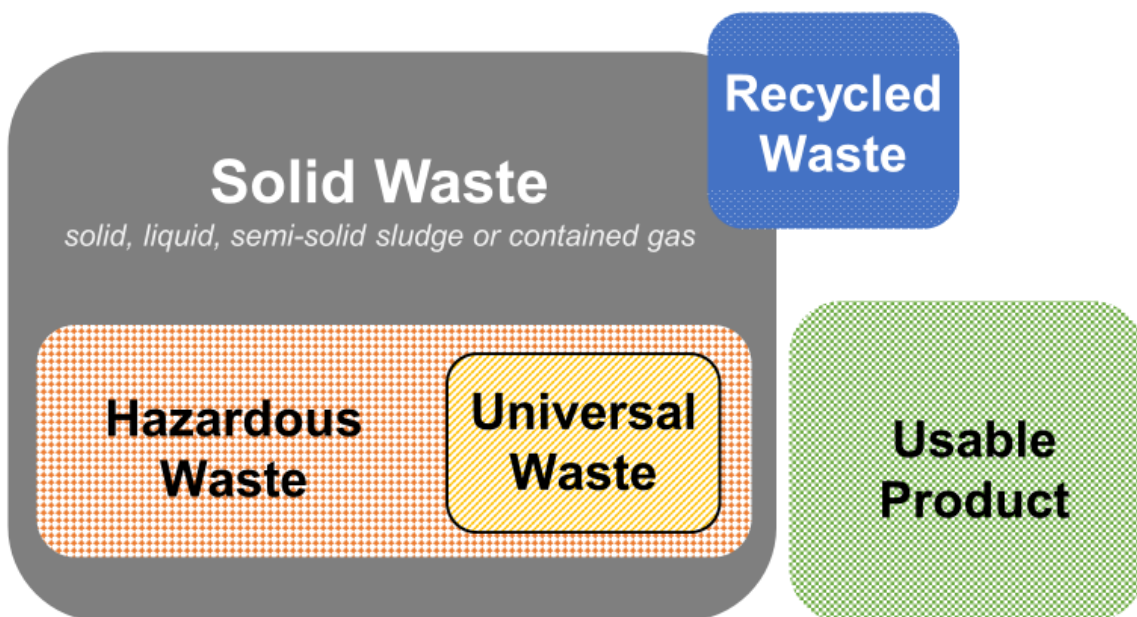
- Cause or significantly contribute to an increase in mortality or serious illness; or
- Pose a substantial hazard to human health or the environment when improperly managed.

Wastes are hazardous if specifically named in the regulations, or if they exhibit any of four characteristics: ignitability, corrosivity, reactivity, and toxicity. The former are called listed wastes, and the latter are called characteristic wastes. Mixtures of solid waste and listed hazardous waste are also considered hazardous waste.

The definition of hazardous waste is in the federal regulations at 40 CFR 261.3 and in Oregon Administrative Rule 340-101-0033 and 340-102-0010.

There are many ways to generate hazardous waste. For example:

- Products are damaged during shipment and are no longer useable.
- Product expires.
- Product is spent - for example, once used, a solvent may become spent.
- Waste is generated by a manufacturing process.



Chapter 2

Pollution prevention and how to avoid problems

This chapter encourages small businesses to consider the benefits of not creating hazardous waste. This chapter also outlines the responsibility of hazardous waste generators and highlights federal and state regulations for properly managing hazardous waste.

Every business generates waste. For some, it might be only wastepaper or dirty water. For others, it might be hazardous waste requiring special handling and disposal. Whatever type or volume of waste a company generates costs money to manage properly. Preventing waste saves money. In addition to financial advantages, preventing waste prevents pollution, making neighborhoods and communities safer, healthier places to live, work and play. Less waste also means fewer regulations, inspections, and fees. The environment, the community and your company benefit from reducing hazardous waste.

Why pollution prevention makes sense

Pollution prevention, or P2, helps reduce or eliminate toxic or hazardous materials. While eliminating or reducing all waste may not be feasible, making as little hazardous waste as possible is in your best interest.

The best way to manage hazardous waste is not to produce it in the first place.

Cleanup costs

Companies and organizations remain legally liable for the hazardous waste they generate from cradle to grave, meaning once you've created the waste, you are responsible for it until its ultimate disposal. This responsibility continues even if the waste is shipped to an approved recycling, treatment, or disposal facility. You may still become a responsible party to a cleanup if your waste contributes to the contamination of the environment. Liability may be reduced if documentation demonstrates proper waste disposal.

1. **Penalties for non-compliance.** Penalties for not complying with DEQ waste management requirements can be as high as \$25,000 per day of violation.
2. **Higher production costs.** You may be spending more money than necessary if the raw materials you purchase end up as waste. You pay for this in two ways: first, when purchasing raw materials, and again, when paying for the treatment or disposal of waste.

Pollution prevention benefits

Businesses have numerous benefits to implementing measures designed to reduce waste and toxics at the source. These include direct cost savings and indirect benefits.

Direct cost savings

- Reduced waste disposal and transportation costs.
- Reduced paperwork and regulatory burden.
- Decreased raw material purchases from improved material efficiency.
- Decreased onsite hazardous waste management costs.

Indirect Benefits

- Reduced worker exposure to hazardous chemicals and waste.
- Positive employer reputation.
- Lowered risk of emergencies involving hazardous substances.
- Help meet environmental goals.

Many companies in Oregon have realized significant cost savings from reducing the toxic chemicals they use and the hazardous waste they generate.

Practical tips for practicing pollution prevention

Environmental management system

- Establish an environmental management system for your business. Build in feedback loops and the checks and balances necessary to intercept ecological problems before they start.

Purchasing and inventory management

- Make an inventory of all hazardous chemicals used.
- Purchase and use fewer harmful chemicals. Look for non-toxic chemicals to replace them.
- Use just-in-time purchasing to avoid storing chemical products past their shelf life.
- Purchase what is needed and avoid out-of-date or off-specification chemicals requiring disposal.
- Practice a first-in-first-out material use policy to minimize the generation of out-of-date or unusable materials that need discarding.
- Establish tracking procedures for chemical products and encourage efficient use.

Process modification

- Reduce the use of toxic chemicals as raw materials.
- Modify processes to reduce hazardous emissions and waste generation. For example, reduce water flow in cleaning operations, replace water cleaning with mechanical methods, or install closed-loop systems for recycling processed wastewater or waste streams.

- Reduce the number of cleaning/degreasing steps or eliminate solvent cleaning where feasible.
- Improve the efficiency of equipment operation.
- Perform regular preventive maintenance on equipment.
- Involve employees and get feedback from them on prevention opportunities.
- Use non-chemical methods to control pests and weeds.
- Invest in parts washers that recycle solvent through closed-loop filtration or distillation.
- Switch to high-efficiency paint application equipment (e.g., high volume-low pressure or electrostatic).
- Maintain equipment to minimize leaks and spills.

Volume reduction

- Don't mix hazardous with non-hazardous waste. You will end up with more hazardous waste than you started with per the mixture rule, 40 CFR 261.3(a)(2)(iv).
- Treat hazardous waste generated on-site as allowed by small quantity generator regulation in 40 CFR 262.15 - 17.

Recovery and reuse

- Recover and recycle hazardous waste on-site.
- Reuse waste in the process.

Material substitution

- Use less hazardous cleaning products, for example, high flash or citrus-based solvents or water-based detergents.
- Use water-based or high solids paint.

Technical assistance

[DEQ's Toxics Reduction and Hazardous Waste Technical Assistance Program](#) is a free, non-regulatory service offering tools and resources to help your business foster innovation and promote efficiency while protecting public health and the environment. Contact your local Technical Assistance Specialist to set up a generator assistance visit. During this free visit, you can ask questions of the specialist, check your compliance with hazardous waste rules and learn about ways to reduce waste and use safer alternatives.

Chapter 3

How to conduct a hazardous waste determination

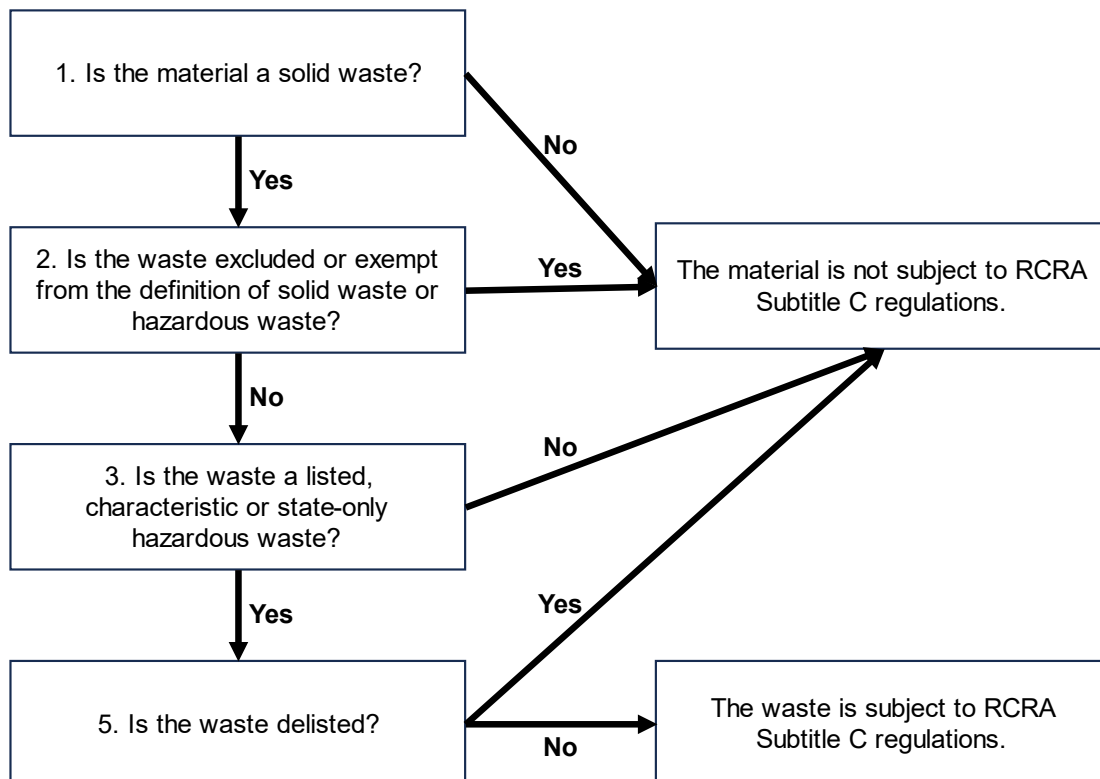
Businesses must evaluate all waste to determine if it is a hazardous waste. This process is called a hazardous waste determination. This chapter outlines the steps needed to complete the process.

Requirements for conducting a hazardous waste determination

Almost every type of business generates hazardous waste. Waste generators are responsible for determining if their waste is hazardous under federal and State of Oregon regulations. Subtitle C of the Code of Federal regulations is the federal program to manage hazardous wastes from cradle to grave. Subtitle C regulations cover generation, transportation and treatment, storage or disposal of hazardous wastes.

Conducting a hazardous waste determination is the foundation for proper hazardous waste management. Failure to perform a hazardous waste determination is one of the most common violations cited by inspectors and can result in a penalty of up to \$25,000 per day.

The Hazardous Waste Identification Process



For additional information on Oregon’s hazardous waste rules and conducting a waste determination, go to DEQ’s [Hazardous Waste Program web page](#).

The 5 steps of a hazardous waste determination

1. Is the material a solid waste?
2. Is the waste excluded or exempted as solid waste or hazardous waste?
3. Is the waste a listed hazardous waste?
4. Is the waste a characteristic hazardous waste?
5. Is the waste a state-only hazardous waste?

Generator knowledge and waste analysis

In general, there are two methods for performing a hazardous waste determination. The first, generator knowledge, uses available information to make the determination. The second is analysis, which relies on analytical waste testing to determine the concentration of hazardous constituents. Generator knowledge, analytical data, or a combination of these form the basis by which all hazardous waste determinations are completed. Whether using generator knowledge, analytical data or both, document and maintain waste determination information for at least three years after generating the waste.

Step 1: Determine if you have a solid waste

The term solid waste can be somewhat misleading. The word solid does not refer to the physical state of the waste. Solid waste can be physically solid, liquid, semi-solid sludge, or contained gas. The Resource Conservation and Recovery Act, RCRA, considers solid waste to be any material no longer used for its originally intended purpose and will be discarded – disposed of, burned, incinerated, etc., or that must be reclaimed or reprocessed before reuse. For any material to be hazardous waste, it must first be solid waste.

Step 2: Check for exclusions and exemptions

Determine if the waste is excluded or exempted from RCRA solid or hazardous waste rules. Refer to regulations for specific listings of excluded and exempted wastes. Oregon excluded the Transfer-Based and Verified Recycler exclusions for hazardous secondary materials from the rules at OAR 340-101-0004(8).

| Reference | |
|-------------------------|--|
| OAR 340-101-0004 | Oregon exclusions |
| 40 CFR 261.2 | Definition of solid waste |
| 40 CFR 261.3 | Definition of hazardous waste |
| 40 CFR 261.4 | Exclusions |
| 40 CFR 261.6 | Requirements for recyclable materials |
| 40 CFR 261.7 | Residues of hazardous waste in empty containers |
| 40 CFR 261.8 | PCB wastes regulated under Toxic Substance Control Act |

Excluded wastes include, but are not limited to:

- Used oil not mixed with hazardous waste sent for energy recovery or recycling.
- Lead acid batteries destined for off-site recycling.
- Wastes discharged with permission into publicly owned treatment works, also called POTW.
- Industrial wastewaters subject to a National Pollutant Discharge Elimination System, or NPDES, permit at the point of discharge.
- Residue in empty containers. Refer to the glossary for a definition of “RCRA empty” and 40 CFR 261.7.
- Materials recycled in an on-site closed-loop process.
- Materials reclaimed from some types of recycling processes.
- Chlorofluorocarbons that are recycled.

Even if you've determined your waste is excluded from hazardous waste regulations, re-evaluate the status periodically to verify that conditions affecting the waste's composition have not changed. Document the exemption or exclusion in operating files.

Refer to 40 CFR 261.2(f) and 268.7(a)(7) for these requirements.

Step 3: Determine if the waste is a federally listed hazardous waste

There are four groups of federally listed hazardous waste. These are F, K, P and U-listed wastes. The P and U lists alone contain over 400 chemicals. Compare waste-generating processes and concentrations of hazardous constituents against all four lists.

F-listed hazardous wastes are from **non-specific** sources, including spent solvents, metal finishing wastes, wood preserving wastes and wastewater treatment sludges from electroplating operations. Knowledge of the process and product is needed to determine F-listed hazardous wastes. 40 CFR 261.31

K-listed hazardous wastes are from **specific** manufacturing sources, including but not limited to spent pickle liquor generated by the steel-making industry and baghouse waste from steel arc furnaces. Knowledge of the industry and process that created the waste is required to determine K-listed hazardous wastes. 40 CFR 261.32

P- and U-listed hazardous wastes are **unused** commercial chemical products, off-specification products, container residues and spill residues of such products. U-listed hazardous wastes include unused acetone, benzene, DDT, mercury, toluene and many more. Chemicals on the U list are toxic. Chemicals on the P list are acute hazardous wastes subject to more rigorous controls than any other listed hazardous wastes. P-listed wastes are so dangerous that small amounts, just 2.2 pounds, are regulated like a large amount of other

hazardous wastes. Examples of P-listed wastes include unused potassium cyanide, sodium azide, acrolein and parathion. 40 CFR 261.33

The process that generates a waste or the presence of a specific chemical will determine if the waste is listed.

Step 4: Determine if the waste is a federal characteristic hazardous waste

There are four categories of characteristic hazardous wastes: ignitable, corrosive, reactive, and toxic. Unlike F, K, P and U, these wastes are hazardous because of their physical or chemical characteristics. A waste is evaluated to determine if it exhibits any of the four characteristics using laboratory analysis, knowledge of the process generating the waste, or both. A waste can be an F, K, P or U-listed waste *and* a characteristic hazardous waste. Below is a discussion of each characteristic.

Ignitability

A waste is ignitable if it is:

- A liquid other than a solution containing less than 24 percent ethyl alcohol by volume, at least 50 percent water by weight, and no other ignitable constituents that has a flash point less than 60°C or 140°F.
- A solid or gas that is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard.
- An ignitable compressed gas.
- An oxidizer.

Ignitable hazardous wastes carry the waste code of D001.

Examples of ignitable wastes include extraction solvents, solvent-based paint, kerosene, and gasoline.

More on ignitability is available at 40 CFR 261.21.

Corrosivity

A waste is corrosive if it is:

- Aqueous with a pH of less than or equal to 2 or greater than or equal to 12.5.
- A liquid that corrodes steel at a rate greater than 6.35 mm (0.25 inch) per year.

Corrosive hazardous wastes carry the waste code D002.

Examples of corrosive wastes include spent sulfuric acid and sodium hydroxide solutions.

More on corrosivity is available at 40 CFR 261.22.

Reactivity

A waste is reactive if it:

- Is normally unstable and readily undergoes a violent change without detonating.
- Reacts violently with water.
- Forms potentially explosive mixtures with water.
- Produces toxic fumes, gases, or vapors when mixed with water in a quantity sufficient to present a danger to the environment.
- Is a cyanide or sulfide-bearing waste that, when exposed to a pH between 2.0 and 12.5, produces toxic fumes sufficient to present a danger to the environment.
- Is capable of detonation or explosive reaction if it is subjected to a strong initiating source or heated under confinement.
- Is readily capable of detonation or explosive decomposition or reaction under standard temperature and pressure.
- Is a forbidden explosive or a Class A or Class B explosive as defined in 49 CFR Part 173.

Reactive hazardous wastes carry the waste code D003.

Examples of reactive wastes include certain cyanide or sulfide-bearing wastes, organic peroxides, chromic acid, and perchlorates.

More on reactivity is available at 40 CFR 261.23.

Toxicity

The toxicity characteristic is determined by having a laboratory analyze an extract of the waste using the Toxicity Characteristic Leaching Procedure or TCLP (pronounced "T-clip"). The analytical results are compared to the regulatory limits of 40 constituents: 8 heavy metals, 22 organic compounds, and 10 pesticides/herbicides. The waste is toxic if the extract contains levels of any of the 40 constituents at or above regulatory limits.

Toxic hazardous wastes carry the waste codes D004 through D043.

Examples of toxic hazardous wastes include contaminated soils and sludges, waste solvents, paint residues, wastes from chemical manufacturing and pesticide/herbicide wastes.

More on toxicity is available at 40 CFR 261.24.

Step 5: Determine if the waste is a state-only hazardous waste

After determining that a waste is neither federally listed nor characteristic, check it against state-only hazardous waste rules.

EPA allows states to have more stringent hazardous waste rules than the Federal government. Oregon DEQ opted to be more rigorous than RCRA with Oregon state-only hazardous wastes. Examples of state-only hazardous wastes include pesticide residues and mixtures of wastes containing constituents of P (3%) and U (10%) listed wastes.

If you determine your waste is a hazardous waste under federal regulations, stop there. In this case, it is unnecessary to complete an Oregon state-only hazardous waste determination.

Determine applicable hazardous waste codes

When making a determination, ensure to consider all relevant waste codes, whether they pertain to listed hazardous waste, characteristic hazardous waste, a combination of both, or state-only hazardous waste. For example, a correct hazardous waste determination for a mixture of waste paint and paint thinner might be D001 for ignitability, F003 and F005 for spent acetone and toluene thinners used to clean the spray gun, and D008 for lead as a constituent of the paint. Recording all hazardous waste codes provides a guide for determining what land disposal treatment standards apply to the waste. A discussion of land disposal restrictions, also called LDRs, is in Chapter 9.

Generator knowledge

Generator knowledge can be used to meet all or part of the waste analysis requirements. The definition of acceptable generator knowledge varies when determining if a waste is listed, characteristic, or both.

Acceptable knowledge that may be used in making an accurate determination as to whether the waste is listed may include waste origin, composition, the process producing the waste, i.e., process knowledge, feedstock, and other reliable and relevant information. Process knowledge includes detailed information about the waste obtained from existing published or documented waste analysis data or studies conducted on wastes generated by processes similar to that which generated your waste. The generator must apply knowledge of the hazard characteristic of the waste based on the materials or the processes used to generate the waste.

Acceptable knowledge may include:

- Process knowledge, such as information about chemical feedstocks and other inputs to the production process.
- Knowledge of products.
- By-products and intermediates produced by the manufacturing process.
- Chemical or physical characterization of wastes.

- Information on the chemical and physical properties of the chemicals used or produced by the process or otherwise contained in the waste.
- Testing that illustrates the properties of the waste.
- Other reliable and relevant information about the properties of the waste or its constituents.

When using generator knowledge alone or in conjunction with sampling and analysis, maintain documentation of the information used to make the waste determination. Documentation used to support generator knowledge may include the following:

- Safety data sheets, SDS, or similar documents.
- Supplier, manufacturer, or vendor information.
- Product labels.
- A thorough process description, including data on all raw materials used in the process.
- Trade associations or corporate headquarters.
- Other forms of detailed documentation.

Waste streams may differ significantly from original products. Use caution when using product labels and safety data sheets. DEQ recommends these not be the only sources of generator knowledge.

Analyzing your wastes

Knowledge of process alone may not be adequate for properly determining hazardous waste. Sampling and analysis of the waste are often more accurate and defensible than using generator knowledge. Sampling and analysis of the waste by a commercial analytical laboratory is often necessary to complete a determination. DEQ recommends preparing a sampling and analysis plan before sample collection and testing begin.

Analysis alone does not constitute a complete hazardous waste determination.

Waste sampling and analysis may be necessary when:

- Beginning a new process or changing an existing one.
- An off-site treatment, storage, and disposal facility request laboratory tests.
- Available information on the chemical makeup of the waste is inadequate to make a complete determination.
- An off-site hazardous waste facility has reason to believe the wastes were not identified accurately.
- A hazardous or solid waste facility receives the waste for the first time.

EPA's Compendium, titled "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods," commonly known as SW-846, serves as the agency's approved set of methods for

complying with RCRA regulations. SW-846 provides guidance on the application of methods and method series, organized by topic, to ensure regulatory compliance. Due to ongoing updates to address changing analytical and measurement requirements, it is crucial to use the latest version of the Compendium to stay current.

Obtain a representative sample

A representative sample(s) is a piece of a whole (e.g., waste pile, lagoon, groundwater) that seeks to reflect the entire waste's characteristics accurately. For example, a bowl of fruit with 15 oranges and 15 apples could generate a representative sample that might include six pieces of fruit: three oranges and three apples. In this case, the sample is truly representative because it reflects the two kinds of fruit in the bowl and the ratio of each type of fruit to the other. Representative samples are useful in analysis when waste stream volumes are large because they contain smaller, manageable versions of the larger whole.

When making a hazardous waste determination, be sure to include all applicable waste codes, whether for a listed hazardous waste, characteristic hazardous waste, a combination of both or a state-only waste.

Collect a representative sample from each waste stream to characterize a waste adequately. SW-846 includes more information on the statistical determination of a valid number of samples, recommended sampling methods, strategies, and applicable sampling equipment.

File all documentation regarding hazardous waste determinations

When using generator knowledge to complete a hazardous waste determination, a generator is required to document all sources of information used to reach this determination for a minimum of 3 years after the waste stops being generated.

Learn more about documentation at 40 CFR 262.11 and OAR 340-102-0011(2).

Using generator knowledge, specifically knowledge of process, can help limit the need for laboratory testing. Testing will not determine if a waste is listed. The process generating the waste determines if the waste is listed. Providing the laboratory with as much information as possible on the known constituents of the waste may reduce your analytical costs.

Whether using knowledge of process or analysis to complete your hazardous waste determination, the outcome needs to be accurate. An incorrect hazardous waste determination is a Class 1 violation subject to civil penalties of up to \$25,000 per day.

Requirements for conducting a hazardous waste determination are at OAR 340-102-0011 and OAR 340-101-0033. State-only hazardous waste rules are at OAR 340-101-0033.

Chapter 4

Determining the amount of hazardous waste generated

All hazardous waste generators must determine the weight of hazardous waste generated and stored on-site each calendar month. Any facility generating more than 220 pounds of hazardous waste per month or storing on-site more than 2,200 pounds of hazardous waste or 2.2 pounds of acutely hazardous waste is a RCRA-regulated generator and manages its waste to specific standards.

What to count

To determine the correct generator status, each generator counts the following:

- Any hazardous wastes stored on-site before treatment or disposal or accumulated before recycling, including hazardous waste accumulating in satellite accumulation containers.
- Hazardous wastewater that is stored or accumulated before entering a wastewater treatment unit or transported off-site to a wastewater treatment unit.
- Hazardous wastes packaged for off-site transport.
- Hazardous wastes destined for a RCRA-regulated disposal or treatment facility.
- Hazardous wastes treated or managed on-site, unless exempt.
- Hazardous wastes recycled on-site when accumulated before recycling.
- Hazardous waste materials that have been removed from service even though they remain in process equipment, for example, a spent or contaminated plating solution in plating tanks.

Some wastes are only included for DEQ annual reporting and are not counted in a generator status determination. These wastes include hazardous wastewater immediately managed upon generation in a wastewater treatment or elementary neutralization unit. If possible, generators should only report the portions of wastewater that are hazardous waste.

Search the DEQ guidance website for Requirements for Owners or Operators of Wastewater Treatment Units.

What to not count

- Waste recycled in a closed-loop system.
- Wastes generated in an active manufacturing unit before removal. For example, do not count sludge in a parts washer until the sludge is removed from the parts washer.
- Hazardous secondary materials that are used or reused without prior reclamation.
- Hazardous secondary materials that are legitimately recycled.
- Used oil that has not been mixed with hazardous waste, provided the used oil is recycled

or burned for energy recovery. Used oil applied for dust abatement is a prohibited activity. Refer to 40 CFR 279 Subpart G.

- Spent lead-acid batteries sent off-site for reclamation.
- Waste that was already counted in the month and was recycled or treated on-site.
- Materials that have been recycled and are ready to be used without further treatment or processing.
- Residue in the bottom of RCRA empty containers.
- Scrap metal that is excluded under 40 CFR section 261.4(a)(13). Scrap metal that does not fall under this exclusion is not subject to RCRA hazardous waste regulation when legitimately recycled.
- Used batteries returned to a battery manufacturer for regeneration.
- Universal wastes that are managed according to 40 CFR part 273.

Refer to 40 CFR 261.2, 40 CFR 261.3, 40 CFR 261.4, 40 CFR 261.6, and 40 CFR 261.7 for exclusions. Wastes fitting these exclusions do not count toward a generator's status. Note that the Transfer-Based and Verified Recycler exclusions for hazardous secondary materials are not operative in Oregon.

Search the DEQ guidance website for the Definition of Solid Waste for more information.

Counting recycled hazardous wastes

The Oregon regulation in OAR 340-100-0002(1) adopts by reference the Federal RCRA regulation on counting hazardous wastes. Generally, recycled hazardous waste is counted every month because, under most circumstances, recycling hazardous waste is defined as a waste management activity. It is important to know how much recyclable material is generated in a calendar month because, if required, that quantity, added to other hazardous wastes generated, will determine the hazardous waste regulations you must follow. Below are several reasons why a hazardous waste generator must count monthly hazardous waste generated.

To determine:

- Generator category and what on-site hazardous waste management regulations to comply with.
- If annual hazardous waste reporting is required.
- If hazardous waste fees are owed.
- If a Toxic Use Reduction Plan is required.
- What volume of hazardous waste is being generated in Oregon.

Whether you count recyclable materials toward your generator status or not generally depends on how the material is recycled and what it is. Typically, recyclable material accumulated or stored before recycling is counted. However, recyclable material collected in containers or tanks and immediately conveyed to an on-site recycling unit with no intervening storage or accumulation is not counted. Also, recyclable material conveyed to an on-site recycling unit in a closed system, such as through pipes, is not counted toward the monthly generator status.

Learn more at 40 CFR 262.1, 40 CFR 261.2(e)(iii) and 261.4(a)(8).

Examples

If you generate spent photo finishing chemicals collected in the photo processing unit and then transferred from the unit to a silver recycling unit, does it have to be counted as hazardous waste? If spent photo finishing chemicals are immediately transferred from the photo processing unit to an on-site, silver recycling unit, they are not required to be counted or included in the monthly waste accumulation generator category determination provided no storage or accumulation of photo finishing chemicals has occurred prior to the recycling.

Also, if you use a recyclable material as a substitute for a commercial chemical product, or as an ingredient to make a product, or if you reclaim a commercial chemical product or characteristic sludge, you do not need to count the materials. The generator will be required to verify the use of the excluded or exempted waste. Wastes excluded or exempted in 261.2 through 261.6 will not be counted. However, a one-time LDR notification for the exclusion or exemption must be maintained.

Refer to 40 CFR 261.2(e)(iii) and 40 CFR 268.7(a)(7).

Chapter 5

Determining generator category

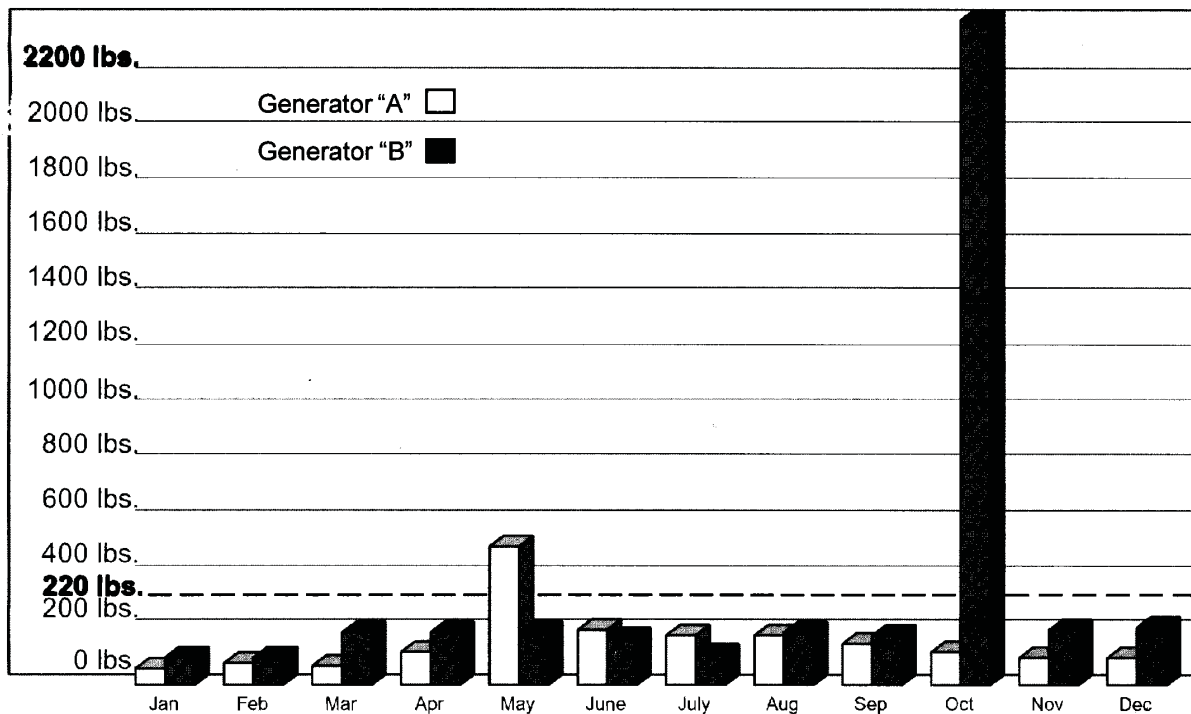
Generators fall into three categories depending on the amount of waste generated and stored monthly. This chapter uses the monthly hazardous waste generation information from the previous chapter to establish if a generator is a very small, small, or large quantity generator.

| In one month | | |
|---|---|---|
| A very small quantity generator or VSQG generates | A small quantity generator or SQG generates | A large quantity generator or LQG generates |
| <ul style="list-style-type: none"> • 220 pounds or less of hazardous wastes • 220 pounds or less of spill cleanup debris containing hazardous waste • 2.2 pounds or less of acute hazardous wastes | <ul style="list-style-type: none"> • More than 220 pounds but less than 2,200 pounds of hazardous waste • more than 220 pounds but less than 2,200 pounds of spill cleanup debris containing hazardous wastes | <ul style="list-style-type: none"> • 2,200 pounds or more of hazardous waste • 2,200 pounds or more of spill cleanup debris containing hazardous waste • more than 220 pounds of spill cleanup debris containing an acute hazardous waste • more than 2.2 pounds of acute hazardous waste |
| Or accumulates | | |
| <ul style="list-style-type: none"> • 2,200 pounds or less of hazardous waste on-site • 2.2 pounds or less of acute hazardous wastes on-site | <ul style="list-style-type: none"> • 13,228 pounds or less of hazardous waste on-site | <ul style="list-style-type: none"> • more than 13,228 pounds of hazardous waste on-site • more than 2.2 pounds of acute hazardous waste on-site |
| Storage and shipping | | |
| 2,200 lbs. or less of hazardous waste may be stored indefinitely. | <p>Waste must be shipped off-site within 180 days after the waste was first placed in a container.</p> <p>If the receiving facility is more than 200 miles from the generation site, the SQG may store wastes for up to 270 days.</p> | <p>Hazardous waste must be shipped off-site within 90 days of the accumulation start date.</p> <p>180-day exemption for F006 meeting specific criteria 40 CFR 262.17(c)</p> |

Consider the following example for generator A:

Even though Generator A produced less than 220 lbs. in 11 months of the year, they are an SQG because May's generation exceeded 220 lbs. Generator A reports the total hazardous waste generated annually, pays fees on the waste, and prepares a toxics use reduction plan. They must also manage May's hazardous waste as a SQG by complying with the appropriate SQG hazardous waste regulations. For the other 11 months, they may manage their hazardous waste as a VSQG. Generator A could also apply for a planned episodic generation event from Oregon DEQ, allowing them to generate above their generator status but not change it.

Refer to the episodic generation events section below or search the DEQ guidance website.



Consider the following for generator B:

Even though Generator B produced less than 220 lbs. of hazardous waste for 10 months, it is a LQG because it generated more than 2,200 pounds in September and October. Generator B manages October's hazardous waste as a LQG by complying with LQG regulations, which are more extensive than SQG regulations. They report the total waste generated for the year, pay fees based on the year's total waste and prepare a toxic use reduction plan.

Notifying DEQ of hazardous waste activities

Who notifies of hazardous waste activity?

All large and small quantity hazardous waste generators notify DEQ of hazardous waste activity using Your DEQ Online. This means that an LQG or SQG may not treat, store, dispose of, transport, or offer for transportation hazardous waste without first notifying DEQ and obtaining a DEQ/EPA Site identification number.

After completing a site ID submission in Your DEQ Online, DEQ assigns a permanent, unique, site-specific, twelve-digit identification number to your physical facility location.

The same Site ID Number cannot be used for multiple locations that have different physical addresses, even if they are owned by the same company.

Use Your DEQ Online to inform DEQ about changes in ownership, business name, location, or facility closure. Site identification numbers are linked to the specific site and cannot be transferred to a different location. If there are alterations in facility ownership, cessation of operations, a name change, or relocation, submit a Site Identification Notification form with the relevant reason and updated details.

The following businesses and operations notify DEQ of their operations and activities using Your DEQ Online:

- Transporters of hazardous waste that are registered and possess a valid EPA identification number from Oregon.
- Marketers and burners of hazardous waste fuel or used oil.
- Universal waste off-site collection sites, destination facilities and pesticide collection programs.
- Hazardous waste recyclers.

What is a DEQ/EPA identification number used for?

A DEQ/EPA hazardous waste identification number is used in the following situations:

- On all manifests when shipping hazardous waste off-site.
- On all correspondence with DEQ.
- On all hazardous waste annual reports.
- On all inquiries regarding hazardous waste fees.

Why would VSQGs also wish to notify?

Many VSQGs notify DEQ to help with record keeping and to obtain an identification number necessary to ship hazardous waste off-site for recycling or permanent disposal. Very small quantity hazardous waste generators are not required to notify, except if they're seeking approval for a planned or unplanned episodic event or have pharmaceutical waste and choose

to opt into 40 CFR 266 Subpart P. Transporters will often not accept waste without a manifest. Few treatment, storage, and disposal facilities, or TSDFs, will receive hazardous waste without a correctly completed manifest, including the generator's identification number.

Episodic generation events

An episodic generation event allows a VSQG or SQG to exceed the threshold for their normal generator status for that month because of an activity that does not typically occur during a generator's routine operations. This provision allows generators to maintain their routine generator status during episodic events if they meet certain conditions.

A VSQG or SQG can conduct one planned and one unplanned episodic event in a calendar year and must submit a petition to DEQ for the second event. The generator has 60 days from the event's start to ship all episodic hazardous waste to an RCRA-designated facility for treatment, storage, or disposal. If the hazardous waste is not moved off-site within 60 days, it counts toward the generator's monthly generation status. SQGs can treat waste on-site for 60 days from the event's start.

Oregon made the following state-specific changes to the federal rule:

- For unplanned episodic events, generators must submit written notification via the Site Identification Notification Form to DEQ within five days of submitting the initial 72-hour notification of the episodic event.
- Planned events require written approval from DEQ.
- All waste generated during an episodic event is subject to existing annual reporting requirements and fees.

Learn more at 40 CFR Part 262 Subpart L and OAR 340-102-0230.

Read DEQ's fact sheet on episodic generation events.

Chapter 6

Properly managing hazardous waste

Keeping hazardous waste inventory records, preparing emergency procedures and preparedness plans, and properly storing and handling hazardous waste are all part of hazardous waste management best practices. This chapter will describe these practices and other management requirements for SQGs.

Small quantity generator management requirements

SQGs, generating greater than 220 but less than 2,200 pounds per month, are required to do the following:

| Requirement | Small Quantity Generators | Regulation |
|--|---|--|
| Conduct a hazardous waste determination | Identify all solid and hazardous waste produced, including state-only hazardous wastes. | Oregon Administrative Rules 340-101-0033 |
| Quantity Limits | Generate more than 220 pounds and no more than 2,200 pounds of hazardous waste per month. | 40 CFR 260.10 |
| DEQ/EPA ID Number | Acquire a unique site identification number from DEQ. | 40 CFR 262.18 |
| On-Site Accumulation Quantity | Accumulate no more than 13,200 pounds of hazardous waste on-site at any time. | 40 CFR 262.16(b)(1) |
| Accumulation Time Limits | Amount of time hazardous waste is allowed to accumulate on-site: <ul style="list-style-type: none"> • 180 days or less. • 270 days or less if transporting greater than 200 miles to a disposal facility. | 40 CFR 262.16(b)-(d) |
| Accumulation Requirements | Basic requirements with technical standards for containers, tanks, drip pads or containment buildings | 40 CFR 262.16(b)(2)-(5) |
| Personnel Training | Ensure personnel complete classroom or on-the-job training to become familiar with proper hazardous waste management and emergency procedures for the wastes handled at the facility. | 40 CFR 262.16(b)(9)(iii) |

| Requirement | Small Quantity Generators | Regulation |
|--|--|--|
| Contingency Plan and Emergency Procedures | <ul style="list-style-type: none"> • Develop procedures to follow during an unplanned major event such as a spill or emergency. • Comply with the modified contingency plan and emergency coordinator requirements. | 40 CFR 262.16(b)(9) |
| Preparedness and Prevention | <ul style="list-style-type: none"> • Develop procedures to follow in the event of an emergency. • Comply with the preparedness and prevention requirements of Subpart C. | 40 CFR 262.16(b)(8)-(9) |
| Land Disposal Restrictions | <ul style="list-style-type: none"> • Meet standards for placing waste on the land and associated requirements for certifications, notifications, and waste analysis plans. • Maintain copies of land disposal restriction notices and certifications for three years after the last shipment of the waste was sent for either on-site or off-site treatment. This includes notifications, certifications, waste analysis data and other pertinent documentation. | 40 CFR Part 268 and 262.16(b)(7) |
| Manifest and transport | <ul style="list-style-type: none"> • Track hazardous waste shipments using the multiple-copy manifest or e-manifest- required by the Department of Transportation and EPA. • Use a transporter with a DEQ/EPA identification number for off-site hazardous waste shipment. • Maintain a copy of manifests for three years. | 40 CFR Part 262 subpart B |
| Waste Minimization | <ul style="list-style-type: none"> • Certify steps taken to reduce or eliminate the generation of hazardous waste. • Toxics use/hazardous waste reduction plan. | 40 CFR 262.27 OAR Chapter 340 Division 135 |
| Transport Requirements | <ul style="list-style-type: none"> • Package and label hazardous waste for shipment off-site to a permitted RCRA facility for treatment, storage, or disposal. • Identify all listed hazardous waste codes, all characteristic hazardous waste codes, all state-only waste codes. | 40 CFR 262.30-262.33 OAR Chapter 340 Division 103 |

| Requirement | Small Quantity Generators | Regulation |
|---|---|---|
| | <ul style="list-style-type: none"> Remember: Ensuring proper transportation and disposal of hazardous waste are the responsibility of the generator. | |
| Reporting and fees | <ul style="list-style-type: none"> Report annually hazardous waste activities. Pay annual generator fees. Retain annual reports and manifest for 3 years from submittal. | OAR 340-102-0041 OAR 340-102-0065 OAR 340-102-0040 |
| Exception and Additional Reporting | <ul style="list-style-type: none"> Report if required copies of signed manifests are not received. Provide information on quantities and disposition of wastes upon request. | 40 CFR 262.42(b) and 262.43 |
| Recordkeeping | Maintain records of waste testing, manifests, biennial reports, and exception reports. | 40 CFR 262.11(f) and 262.40(a) and (d) |
| Facility Type | <ul style="list-style-type: none"> Dispose of hazardous waste only at RCRA Subtitle C permitted treatment, storage, and disposal facilities. All wastes regulated as hazardous waste in other states is managed as hazardous waste when brought into Oregon. That is, no disposal of hazardous waste in Subtitle D solid waste landfills. | 40 CFR Parts 264/265, 266/267 and 270 |
| Closure | Close tanks, drip pads and containment buildings by meeting specified performance standards and disposal and decontamination requirements. | Tanks only: 40 CFR 262.16(b)(3)(vi) Unit-specific Part 265, subpart W and DD for drip pads and containment buildings |
| Report spills | Spill reporting requirements. | OAR Chapter 340 Division 142 |

Managing hazardous waste in containers

Establish routine housekeeping that includes these best management practices to avoid spills or releases when handling and storing hazardous waste.

- Label the containers with the words “hazardous waste,” the date waste first entered the container (called the accumulation start date), and an indication of the hazards of the contents. Facilities may use supplemental labels in other languages in addition to English labeling.
- Keep containers holding hazardous waste closed except when adding or removing waste.

- Ensure containers are compatible with the waste, in good condition (containers have no severe rusting, apparent structural defects, or deterioration, and no visible leaks), handled carefully and replaced if leaking occurs.
- Label containers and tanks to indicate the hazards of the contents in hazardous waste storage units.
- Inspect containers at least weekly for leaks, signs of corrosion, proper labeling, and adequate aisle space. Keep an inspection log.
- Containment buildings must have a sign posted in an obvious and visible place with the words “hazardous waste” and an indication of the hazards of the waste.
- Ship waste off-site or treat waste on-site within 180 days of generation. If the treatment, storage, or disposal facility, also called a TSD, is more than 200 miles away, an SQG can store waste for up to 270 days.
- Before shipment, label containers with the RCRA hazardous waste codes or use a barcoding system that performs the same function. Ensure containers meet Department of Transportation standards.

To avoid fire, leaks, or other potentially dangerous reactions, store incompatible wastes in dedicated, separate containers or tanks.

Refer to 40 CFR 265 Subpart I, 40 CFR 262.16(b)(6): conditions for exemption for an SQG that accumulates hazardous waste.

Managing Hazardous Waste in Tanks

SQGs may choose to store hazardous waste in storage tanks instead of containers.

- Store hazardous wastes in tanks designed to store the wastes.
- Do not place incompatible wastes in the same tank.
- Store or treat reactive and ignitable wastes to prevent their reacting or igniting. Keep tanks covered or have at least two feet of freeboard in uncovered tanks.
- Inspect tank monitoring and gauging systems daily and look for leaks or corrosion weekly.
- Mark tanks with the date when waste was first put in the tank and the words “hazardous waste.”
- Comply with the National Fire Protection Association, NFPA, buffer zone requirements for tanks containing ignitable or reactive wastes. These requirements specify distances considered safe buffer zones for various liquids.
- Remove waste from the site or treat it on-site under the 180- or 270-day limit.

Refer to 40 CFR 265 Subpart J.

Hazardous Waste Storage Areas

DEQ recommends hazardous waste storage areas include:

- A solid base that holds leaks and spills until they are discovered and removed.
- Sealed cement surfaces to prevent contamination of underlying soil and groundwater.
- A drainage system to separate containers from rainwater and spillage.
- A holding area large enough to contain a spill amounting to the volume of the largest container, or 10 percent of the total volume of all containers, whichever is greater.
- A covering to prevent run-on and run-off.

Treating or managing hazardous waste on-site

SQGs may treat hazardous wastes generated on-site without a permit if certain conditions are met:

- Waste is treated in a RCRA-exempt wastewater treatment unit.
- Treatment takes place within an accumulation tank or closed container.
- Waste is treated within 180 days from the date it is accumulated.
- Containers and tanks meet RCRA regulations.
- A modified contingency plan is prepared and followed.
- A written waste analysis plan is prepared and kept in the generator's files on site.

Refer to 40 CFR 268.7(a)(5).

If a generator does not meet these requirements and treats hazardous waste on-site, it must obtain a RCRA hazardous waste treatment permit. A generator may not dispose of its hazardous waste on-site unless it has obtained a hazardous waste treatment, storage, and disposal permit.

More on this process is in 40 CFR 270.

Satellite accumulation areas

The purpose of the satellite accumulation area, or SAA, regulations are to allow the generator to store small amounts of hazardous waste on-site until enough accumulates to handle it economically. Satellite accumulation can be an important element of a successful waste management plan.

Label satellite accumulation containers with the words "hazardous waste" and provide a label indicating the contents' hazards, the same as hazardous waste containers in central accumulation storage areas.

Find more information about satellite accumulation area regulations at 40 CFR 262.15(a)(5).

Elements of a successful satellite accumulation area

A generator maintaining a satellite accumulation area must meet the following elements:

- Accumulate no more than 55 gallons of hazardous waste, one quart of liquid or 2.2

pounds of acutely hazardous waste as described in 40 CFR 261.33(e), also called P-listed wastes

- The SAA must be at or near the point of generation where wastes initially accumulate.
- Keep the SAA under the control of the operator of the process generating the waste.
- Mark SAA containers with the words “hazardous waste” and an indication of the hazards of the contents.
- Keep SAA containers closed except when adding, removing, or temporarily venting.

When the generation limit of 55 gallons of hazardous waste, one quart of liquid acute hazardous or 2.2 pounds of solid acute hazardous waste is reached, the generator must move the waste within three calendar days to either a central accumulation area operated according to the applicable regulations in 40 CFR 262.15, an on-site interim status or permitted treatment, storage, or disposal facility, or an off-site designated facility.

During the three-consecutive calendar-day period, the generator must continue to comply with all SAA regulations.

Common SAA violations

- Failure to keep the container closed except when adding or removing hazardous waste or venting.
- Failure to mark the satellite container with the words “hazardous waste”.
- Failure to indicate the hazards of the contents.
- Failure to place the SAA container at or near the point of generation.
- Exceeding generator limits, that is, 55 gallons of hazardous waste, one quart of liquid acute hazardous waste or 2.2 pounds of solid acute hazardous waste.
- Failing to date the container once the generation limit is reached.

Tips for managing hazardous wastes

Keep an inventory of wastes

DEQ recommends maintaining a complete written record of all hazardous waste management activities, including on-site treatment, the first date of accumulation, amount, type, and the number of containers of each hazardous waste generated.

Avoid mixing waste streams

Place each waste type in separate containers. Do not mix different wastes, as this can increase the cost of identifying, testing, disposing, or recycling the contents.

Recordkeeping

Keep all hazardous waste determination documentation, manifests, manifest exceptions, manifest discrepancy reports and land disposal restriction records for three years.

Preparing for and preventing emergencies and spills

A SQG must maintain and operate its facility to minimize the possibility of a fire, explosion, or any unplanned release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

Maintain aisle space to allow the unobstructed movement of personnel and equipment to any area of the facility in case of an emergency or inspection. Since the regulation does not specify a particular aisle space size, DEQ recommends maintaining a minimum aisle space of at least 30 inches.

Read more about these requirements at 40 CFR 262.16(b)(8)(v).

Specific required equipment

All areas where hazardous waste is generated or accumulated must be equipped with the following, unless none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below or the actual waste generation or accumulation area does not lend itself, for safety reasons, to have a particular kind of equipment specified below. A SQG may determine the most appropriate locations for equipment necessary to prepare for and respond to emergencies.

- Internal communications or alarm systems that can provide immediate emergency instruction by either voice or signal to facility personnel.
- A telephone, two-way radio, or similar communication device immediately available at the scene of operations capable of summoning emergency assistance from local police, fire, state, or local emergency response teams.
- Portable fire extinguisher, fire control, spill control, and decontamination equipment.
- Water at adequate volume and pressure to supply water hose streams, foam-producing equipment, automatic sprinklers, or water spray systems.
- All required facility communications, alarm systems, fire protection equipment, spill control equipment, and decontamination equipment must be tested and maintained as necessary to ensure proper operation in times of emergency.

Whenever hazardous waste is handled in any way, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee.

- If one employee is on the premises while a facility is operating, they must have immediate access to a device, such as a telephone or a hand-held two-way radio, capable of summoning external emergency assistance.

Refer to 40 CFR 262.16(b)(8) for more on these requirements.

Arrangements with local authorities

A SQG must attempt to make arrangements with the local police department, fire department, other emergency response teams, emergency response contractors, equipment suppliers and local hospitals, considering the types and quantities of hazardous wastes handled at the facility. Arrangements may be made with the local emergency planning committee if it is determined to be the appropriate organization.

- As part of this coordination, generators must attempt to make necessary arrangements to familiarize emergency responders with the facility layout, places where personnel normally work, possible evacuation routes, the properties, and hazards of and potential injuries or illnesses caused by hazardous waste at the facility.
- Where more than one police or fire department might respond to an emergency, the generator shall attempt to make arrangements designating a primary and supporting emergency authority.
- A SQG shall maintain records documenting the arrangements with the local fire department and any other organization necessary to respond to an emergency. These records, kept in the operating record, either confirm that such arrangements exist or that attempts were made to make such arrangements.
- A facility possessing 24-hour response capabilities may seek a waiver from the authority having jurisdiction over the fire code within the facility's state or locality. This is often, but not always, the Fire Marshall. If granted, this waiver, documented in the operating record, removes the need to make arrangements with local emergency responders.

Refer to 40 CFR 262.16(b)(8)(vi) for more information on these requirements.

Preparing a contingency plan

SQGs comply with the preparedness and prevention section of the regulations at 40 CFR 262.16(b)(8). These requirements intend to ensure that employees are adequately prepared to handle hazardous waste and respond to emergencies. This modified contingency plan does not have to be written. However, a written plan is much easier to develop and implement.

Personnel training for emergency procedures

SQG's must ensure all employees are thoroughly familiar with proper waste handling and emergency procedures specified in 40 CFR 262.16(b)(8) and (9). Workers must be trained and aware of emergency procedures, including:

- Location of telephone emergency numbers, fire extinguisher, and spill control materials.
- Evacuation routes and procedures to account for employees.
- Procedures for using, inspecting, repairing, and replacing the emergency equipment.
- Procedures for employees who stay behind for the shutdown of facility operations and their evacuation.
- Rescue and first aid duties.

- DEQ recommends providing training in the staff's primary language.

Emergency coordinator, responsibilities, and spill reporting

An employee designated as the emergency coordinator is either on the premises or available to respond to an emergency by reaching the facility quickly. This employee has the responsibility for coordinating all emergency response measures specified in 40 CFR 262.16(b)(9)(iv).

The following information must be posted next to telephones or in areas directly involved in generating and accumulating hazardous waste.

- The name and phone number of the emergency coordinator.
- The location of fire extinguishers, fire alarms, and spill control materials.
- The phone number of the fire department.

The emergency coordinator or their designee must respond to any emergencies that arise. The appropriate responses are as follows:

- In the event of a fire, call the fire department and, if appropriate, attempt to extinguish it using a fire extinguisher. 40 CFR 262.16(b)(9)(iv)(A)
- In the event of a spill, contain the flow of hazardous waste to the extent possible. As soon as possible, clean up the hazardous waste and any contaminated materials or soil. 40 CFR 262.16(b)(9)(iv)(B)
- In the event of a fire, explosion, or other release that could threaten human health outside the facility, or when the generator knows a spill has reached surface water, notify both the Oregon Emergency Response System, 1-800-452-0311, and the National Response Center at 1-800-424-8802. Refer to the section on Spills in Chapter 12 for reporting requirements.

Chapter 7

Selecting a transporter, recycler, TSDf, contractor or consultant

Selecting a hazardous waste transporter

In most cases, hazardous waste is transported to a hazardous waste treatment, storage, or disposal facility, or TSDf, for proper disposal. State and federal laws require transportation to be completed properly and safely.

When selecting a transporter, remember a generator of hazardous waste has cradle to grave responsibility. Confirm that the transporter has obtained a DEQ or EPA identification number by contacting DEQ's Hazardous Waste Program at 1-844-841-4938. You may contact the Oregon Department of Transportation at 503-378-6699 if you have questions concerning a transporter and compliance with shipping regulations.

Selecting a TSDf or recycler

A TSDf or recycler is authorized to handle only specific hazardous wastes. As part of its authorization, a TSDf agrees to comply with many stringent state and federal requirements. Before shipping waste to a TSDf or recycler, make sure the company can accept it.

Carefully select TSDfs or recyclers. Check the facility compliance history using EPA's Enforcement and Compliance History Online, called ECHO, or contacting the appropriate agencies, such as the Washington Department of Ecology or Oregon DEQ. In addition, when possible, consider visiting the facility to observe its operations.

Remember, generators have cradle-to-grave responsibilities for their waste.

Selecting a consultant or contractor

Before hiring a consultant, review what your company's needs are. Not all consultants, contractors, TSDfs, or transporters are qualified to help in all situations. After deciding the needs, be sure the consultant knows and understands them. Know what work is done, what needs to be done, and the progress made.

Check references when hiring a consultant, selecting a TSDf, or selecting a hazardous waste transporter. If the selected facility causes contamination that cannot be remediated, the waste generator may be responsible for the cleanup costs of the facility under CERCLA, the Comprehensive Environmental Response, Compensation and Liability Act, also known as Superfund.

Best practices for selecting a consultant or contractor include:

- If possible, visit the TSDF.
- Ask for references when selecting a TSDF, transporter, or consultant.
- Check DEQ's enforcement and compliance records. Check for information using DEQ's facility profiler for environmental permits and site cleanup information. These files can provide insight into the facility's past management practices. EPA and Oregon Department of Transportation also maintain compliance records.
- Always make sure the terms of the contract are clear. Know who is required to do what, when, and have it in writing.
- Investigate waste haulers before initiating a contract. Some transporters use a 10-day transfer exemption, which allows them to store hazardous waste for up to ten days before transporting to the disposal facility. Find out where these companies are storing waste during this period.
- When evaluating disposal options, weigh long-term liabilities over immediate cost savings. Sometimes, the lowest price may not be the best choice.
- Consider the company's long-term financial stability.
- Ask for a copy of the certificate of disposal showing when the waste was disposed of or incinerated.
- Ensure the waste is managed correctly at the hazardous waste disposal facility. To save money, some disposal facilities stockpile drums of difficult wastes.
- Make payments to your waste hauler contingent upon receipt of a signed manifest from the receiving TSDF.

Chapter 8

Shipping hazardous waste and manifesting requirements

EPA established a national electronic system for tracking hazardous waste shipments. This system, known as “e-Manifest,” modernized the nation’s cradle-to-grave hazardous waste tracking process while saving industries and states time, resources, and dollars.

EPA’s hazardous waste manifest system tracks hazardous waste from when it leaves the generator’s facility until it reaches the off-site waste management facility that will store, treat, or dispose of it. Completing a manifest accurately is crucial to properly tracking hazardous waste from cradle-to-grave.

Requirements for shipping hazardous wastes off-site

EPA designed the manifest system to track the movement of waste. The key component of this tracking system is the Uniform Hazardous Waste Manifest, a form required by EPA and the U.S. Department of Transportation for all generators who transport or offer to transport hazardous waste for off-site treatment, recycling, storage, or disposal. When completed on paper or electronically with the e-manifest system, the form contains information on the type and quantity of the waste transported, instructions for handling the waste, and signature lines for all parties involved in the disposal process. Each party that handles the waste signs the manifest and retains a copy. This process ensures critical accountability in the transportation and disposal processes. Once the waste reaches its destination, the receiving facility returns a signed copy of the manifest to the generator, confirming that the designated facility has received the waste. The signed manifest guarantees the hazardous waste made it to the designated facility and is not illegally disposed of or stored.

Keep in mind hazardous waste from an SQG or LQG is prohibited from disposal in a Subtitle D solid waste landfill in Oregon.

e-Manifest

Generators, transporters, and receiving facilities can create and submit manifests electronically. Visit EPA’s [Hazardous Waste Electronic Manifest System page](#) for more information.

Benefits of the e-Manifest system include:

- Less costly than a paper manifest.
- Accurate and more timely information on waste shipments.
- Rapid notification of discrepancies or other problems related to a particular load.

- Creation of a single hub for one-stop reporting of manifest data for use by EPA and states.
- Increased effectiveness of compliance monitoring of waste shipments by regulators.

How to complete a manifest

The Uniform Hazardous Waste Manifest is a special shipping document that must accompany hazardous waste shipments if a manifest is required. Directions for completing a hazardous waste manifest follow. Each number corresponds to the box number on the manifest. The State of Oregon requires the use of EPA form 8700-22 and, if necessary, supplemental EPA form 8700-22A.

The following manifest items must be completed:

1. Your DEQ/EPA Identification Number.
2. Page 1 of ____ . List the number of pages including the first page plus the number of 8700-22A forms.
3. Emergency Response Phone Number.
4. Manifest Tracking Number. This unique tracking number must be preprinted on the manifest forms.
5. Generator's Name, Mailing Address, Phone Number, and Site Address of the facility where the waste was generated and managed.
6. Transporter 1 Company Name and U.S. EPA ID Number.
7. Transporter 2 Company Name and U.S. EPA ID Number. If more than two transporters are needed, use a continuation sheet EPA form 8700-22A.
8. Designated Facility Name, Site Address, and U.S. EPA ID Number.
9. U.S. DOT Description. Including Proper Shipping Name, Hazard Class or Division, Identification Number and Packing Group.
10. Containers, number, and type. Enter the number of containers for each waste and the appropriate abbreviation for the type of container.
11. Total Quantity. Enter the total quantity of waste described on each line. Your measurement must include the weight of the container. Do not use fractions or decimals; round off to the next whole number.
12. Unit weight/volume. Enter the appropriate abbreviation for the unit of measure for each quantity entered under Block #13. G = Gallons, L = Liters, P = Pounds, K = Kilograms, T = Tons, M = Metric Tons, Y = Cubic Yards, N = Cubic Meters.
13. Waste Codes. Enter up to six federal and state waste codes to describe each waste stream identified in Item 9b. State waste codes that are not redundant with federal codes must be entered here, in addition to the federal waste codes which are most representative of the properties of the waste.

14. **Special Handling Instructions and Additional Information:** Generators may enter any special handling or shipment-specific information necessary for the proper management or tracking of the materials under the generator's or other handler's business processes, such as waste profile numbers, container codes, bar codes, or response guide numbers. Generators also may use this space to enter additional descriptive information about their shipped materials, such as chemical names, constituent percentages, physical state, or specific gravity of wastes identified with volume units in Item 12. This space may be used to record limited types of federally required information for which there is no specific space provided on the manifest, including any alternate facility designations; the manifest tracking number of the original manifest for rejected wastes and residues that are re-shipped under a second manifest; and the specification of PCB waste descriptions and PCB out-of-service dates required under 40 CFR 761.207. Generators, however, cannot be required to enter information in this space to meet state regulatory requirements.
15. **Generator's/Offeror's Certification:** The Generator must read, sign, and date that the information in the manifest is accurate.
16. **International Shipments:** The primary exporter must check the export box and enter the point of exit. For import shipments, the importer must check the import box and enter the point of entry.
17. **Transporter's Acknowledgement of Receipt of Materials:** Enter the name of the person accepting the waste on behalf of the first transporter. If applicable, enter the name of the person accepting the waste on behalf of the second transporter. Transporters must acknowledge acceptance of the waste by signing and entering the date of the receipt.
 - a. **Discrepancy Indication Space:** The authorized waste facility representative must note any discrepancies between the waste described on the manifest and the waste actually received at the facility.
 - b. **Alternate Facility (or Generator) for receipt of Full Load Rejections:** Enter the name, address, phone number, and EPA Identification Number of the Alternate Facility which the rejecting TSDf has designated, after consulting with the generator, to receive a fully rejected waste shipment.
 - c. **Alternate Facility (or Generator) Signature:** The authorized representative of the alternate facility (or the generator in the event of a returned shipment) must sign and date this field of the form to acknowledge receipt of the fully rejected wastes or residues identified by the initial TSDf.
18. **Hazardous Waste Report Management Method Codes:** Enter the most appropriate Hazardous Waste Report Management Method code for each waste listed in Item 9. The Hazardous Waste Report Management Method code is to be entered by the first treatment, storage, or disposal facility that receives the waste and is the code that best describes the way in which the waste is to be managed when received by the TSDf.
19. **Designated Facility Owner or Operator Certification of Receipt (except as noted in item 18a):** Enter the name of the person receiving the waste on behalf of the owner or operator of the facility. That person must acknowledge receipt or rejection of the waste described on the Manifest by signing and entering the date of receipt or rejection where indicated.

Continuation sheet (EPA form 8700-22A)

The continuation sheet is used when more than two transporters are to be used to transport the waste or when more waste is required for the U.S. DOT descriptions and related information in Block #9.

Packaging and labeling requirements

When shipping hazardous waste off-site, the packaging and labeling of these wastes must meet the U.S. Department of Transportation shipping requirements. In Oregon, the Oregon Department of Transportation regulates the transportation of hazardous waste. The generator may rely upon the product manufacturer or the transporter for packaging and labeling information. The transporter may also package the waste as part of the transportation cost.

Learn more about the packaging and labeling requirements at 49 CFR Parts 171-185.

Exception reporting

The designated disposal facility must return the signed manifest to the generator within 35 days of the waste shipment.

If a generator does not receive a signed manifest from the designated treatment, storage, and disposal facility within 35 days of when the waste was shipped, the generator must contact the management facility designated on the manifest.

Within 45 days from the date of shipment, if a generator still has not received a signed manifest from the designated facility, the generator must file an exception report with DEQ. This report includes a legible copy of the manifest in question and a letter explaining efforts to locate the hazardous waste. Send the exception report to your DEQ Hazardous Waste Compliance Inspector or call DEQ at 503-229-5696.

Generators are liable for their waste from cradle to grave. The generator may ultimately be responsible for the cleanup costs of illegally disposed waste.

For more information on exception reporting, refer to 40 CFR 262.42.

Generators must keep copies of manifests and land disposal restriction notifications or certification statements for three years. It is a best practice to keep manifests for the life of a facility since they are proof of proper waste handling.

Waste minimization certification

An SQG who initiates a shipment of hazardous waste must certify the following statement in Item 15 of the Uniform Hazardous Waste Manifest: (b) "I am a small quantity generator. I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford."

Chapter 9

Land disposal restriction requirements

In 1984, Congress created the Land Disposal Restrictions program as part of the Hazardous and Solid Waste Amendments to the Resource Conservation and Recovery Act. HSWA prohibits land disposal, such as placement in a landfill, of untreated hazardous wastes. It also requires EPA to specify either concentration levels or treatment methods for hazardous constituents, also called treatment standards, that must be met before land disposal.

The regulations describing EPA's LDR program are at 40 CFR Part 268.

Why place restrictions on land disposal?

Uncontrolled land disposal of hazardous waste threatens human health and the environment. The LDR program ensures that wastes are properly treated before disposal. LDRs make hazardous waste less harmful to groundwater by reducing the potential for leaching of hazardous constituents and by reducing waste toxicity by destroying or removing harmful components. Hazardous waste must meet specific constituent levels or treatment standards before being disposed of on the land.

Who is affected?

SQGs can treat their hazardous waste to meet specific constituent levels or use a specific treatment technology before land disposing or applying the waste on the land in any manner. A generator may treat its waste on-site or ship it off-site for treatment to meet the LDR standards.

How do generators meet these standards?

Due to the complex regulatory requirements and cost, most small quantity generators ship waste off-site to be treated to meet LDR treatment standards rather than treat the waste on-site. Most hazardous waste service providers can help generators complete the required paperwork. Ultimately, the generator is responsible for document accuracy.

Below is the basic framework for complying with the land disposal restrictions.

1. Determine whether the waste is subject to LDRs at the point of generation. If waste is hazardous, then it is subject to LDRs. Refer to OAR 340-102-0011 and 40 CFR 268.7(a)(1).
2. Determine if the waste is excluded from the definition of hazardous waste or exempted under 40 CFR 261.2 through 261.4 and 261.6. [NOTE: The Transfer-Based and Verified Recycler exclusions for hazardous secondary materials are not operable in Oregon.] If so, a one-time notice for the exclusion or exemption must be completed and maintained in the generator's files. Refer to 40 CFR 268.7(a)(7).

3. Determine all the applicable hazardous waste code(s) for the hazardous waste. Be sure to identify all applicable listed *and* characteristic waste code(s).
4. Determine the waste's treatability group. Is the waste "wastewater" or "non-wastewater?" Wastewater contains less than one percent total organic carbon by weight and less than 1 percent total suspended solids by weight. Refer to 40 CFR 268.2. Non-wastewater is waste that does not meet the definition of wastewater.
5. Use the *Treatment Standard for Hazardous Wastes* in 40 CFR 268.40 to identify the treatment standard for wastewater or non-wastewater. Note some standards include 40 CFR 268.48, the *Universal Treatment Standard* for underlying hazardous constituents that may be associated with your waste. Additionally, record whether the waste is considered a subcategory within a specific hazardous waste code. This information is required for the notification or certification paperwork. Test, or otherwise evaluate, the waste to determine if it exceeds the treatment standards found in 40 CFR 268.40 and, if applicable, 40 CFR 268.48, and must be treated before it can be land disposed. Refer to 40 CFR 268.7(a)(1) and (a)(6).
6. Observe prohibitions and controls on the dilution or mixing of restricted wastes in 40 CFR 268.3.
7. Complete the notification requirements for wastes exceeding the treatment standards. Refer to 40 CFR 268.7(a)(1) and (a)(2) or complete the certification requirements for wastes meeting the treatment standards. Refer to 40 CFR 268.7(a)(3).
8. Comply with applicable packaging and manifesting requirements.

Certification requirements for generators of waste that do not meet treatment standards

When sending characteristic and listed hazardous wastes that do not meet the treatment standards off-site to a permitted TSDF for treatment, a generator notifies the receiving facility of the following:

- Applicable hazardous waste code(s) (e.g., D008 for lead).
- Treatability group of the waste, i.e., wastewater or non-wastewater, and any subcategory within a waste code, such as non-wastewater, D008 - lead acid battery subcategory.
- The manifest number of the initial shipment of waste associated with the notification.
- Any waste analysis data.

Keep a copy of the notice with the originating manifest in the operating file. A new notification is required if the nature of the waste changes or the waste is shipped to a new facility.

Certification requirements for generators of waste that meet treatment standards

Initial waste shipments meeting LDR treatment standards include a signed certification notifying the disposal facility that the waste meets the treatment standard concentration levels. This certification includes the following information:

- Applicable hazardous waste code(s) (e.g., D008 for lead).
- The treatability group of the waste, i.e., wastewater or non-wastewater, and any subcategory within a waste code such as non-wastewater, D008 - lead acid battery subcategory.
- The manifest number of the initial shipment of waste associated with the certification.
- Waste analysis data, if available.

The certification statement is to be signed by an authorized representative. Keep a copy of the certification with the originating manifest in the operating file. A new notification is required if the nature of the waste changes or the waste is shipped to a new facility.

Refer to 40 CFR 268.7(a)(3).

Treating wastes

When treating land disposal restricted wastes on-site, the generator has responsibilities like those of commercial treatment facilities. Generators treating hazardous waste to meet LDR requirements must develop a written waste analysis plan and fill out an LDR certification of compliance with treatment standards according to 40 CFR 268.7(d)(3)(iii). 40 CFR 268.7(d)(3)(iii).

- Maintain the written waste analysis plan and waste analysis records on-site in the generator's files. Refer to 40 CFR 268.7(a)(5).
- A generator may not dilute hazardous waste to avoid the required treatment. Refer to 40 CFR 268.3.
- Special regulations apply to characteristic wastes treated to meet LDRs. Refer to 40 CFR 268.5.

Treatment may only take place in tanks, containers, and containment buildings.

Note: 40 CFR 268.7(a)(6) requires generators who determine that their waste is land disposal restricted based solely on knowledge of process must retain all supporting data used in their files for 3 years after the last shipment of the waste was sent for either on-site or off-site

treatment. This includes waste analysis data, knowledge of process information and any other pertinent documentation.

Recordkeeping

Keep all LDR paperwork, including notifications, certifications, waste determinations, waste analysis plans, manifests, etc., on-site for three years from the last date the waste was sent off-site or treated on-site. Refer to 40 CFR 268.7(a)(6) and (a)(8).

Chapter 10

Hazardous waste fees

Revenue from hazardous waste generator fees primarily funds Oregon's federally mandated hazardous waste management program, which includes compliance inspections and complaint investigations. The program also provides technical assistance to the regulated community on proper hazardous waste management, how to comply with state and federal regulations, and how to reduce the amount of hazardous waste generated. These activities help Oregon achieve its hazardous waste minimization, safe management, and cleanup goals.

Annual hazardous waste generator fees

Hazardous waste generator fees have two components:

1. Activity verification fee.
2. Hazardous waste generation fee.

These fees, combined, constitute the total fees hazardous waste generators pay on their annual invoice. Invoices are sent out mid-year for hazardous waste generated and managed during the previous calendar year. The activity verification and hazardous waste generation fees described below are invoiced annually.

Annual activity verification fee

All generators of hazardous waste who have notified DEQ and obtained a Site Identification Number are assessed a fee according to the generator category.

- Very small quantity generators do not pay fees.
- Small quantity generators pay \$540.
- Large quantity generators pay \$945.

Annual hazardous waste generation fee

SQGs and LQGs reporting hazardous waste generation and management during a calendar year pay the generation fee. VSQGs conducting an approved episodic event also pay this fee. The hazardous waste generation fee is calculated by multiplying the base fee by the weight in metric tons of each hazardous waste stream and by a fee factor ranging from 0.00 to 2.55, according to the waste management method. The fee factors reflect Oregon's hierarchy of preferred management methods and offer financial incentives for environmentally responsible hazardous waste management.

Examples of calculating hazardous waste generator fees*

| Management Method and Code | Annual Amount Generated | Base Fee, Per Metric Ton | Fee Factor | Waste Generation Fee | SQG Generator Status Activity Verification Fee | Total Invoice |
|-----------------------------------|---------------------------------|---------------------------------|-------------------|-----------------------------|---|----------------------|
| Landfill Disposal H132 | 4 metric tons X (8,820 lbs.) | \$130 X | 2.55 = | \$1,326 + | \$540 = | \$1,866.00 |
| Fuel Blending H061 | 4 metric tons X (8,820 lbs.) | \$130 X | 1.28 = | \$665.60 + | \$540 = | \$1,205.60 |

*Assumes more than 220 lbs. but no more than 2,200 lbs. are generated in any one month.

Chapter 11

Annual hazardous waste reporting

DEQ has developed consolidated online annual reporting forms for generators to report their hazardous waste generation and management activities. In this chapter, you will learn about reporting requirements.

Annual reports are required from all LQGs and SQGs as well as VSQGs approved for an episodic event.

In late December every year, DEQ notifies registered generators of their reporting requirement. By March first of each year, all generators and hazardous waste handlers with an ID number complete an annual hazardous waste report through DEQ's online reporting system, Your DEQ Online. Your DEQ Online collects information to meet DEQ's hazardous waste generation and management data needs. The information from annual generator reports allows DEQ to meet its reporting requirements to EPA.

Information that is collected on the annual hazardous waste report

There are two parts to the annual hazardous waste report: the RCRA Site Identification form and the Waste Generation and Management form.

The Site ID form collects site contact information and generator status. A generator's status may change from month to month. However, for reporting purposes, generator status is based on the largest amount of waste generated in one calendar month outside of an approved episodic generation event. For example, if a company generated 3,000 pounds of hazardous waste in November (and this waste was not generated during either a planned or unplanned episodic event) but only 1,000 pounds per month the rest of the year, it would report as an LQG on its annual report.

Generators and handlers can use the RCRA Site ID form to withdraw their RCRA Site ID Number if the company moves to a new location or is no longer generating regulated amounts of hazardous waste. RCRA Site ID Numbers are not transferable to other physical locations.

The waste generation and management form, or GM form, collects hazardous waste stream information. A GM form is required for each waste stream to report the quantity generated and the management method. Waste codes and other questions are also asked on the GM form to help DEQ with its data needs for planning and EPA requirements.

Report data allows DEQ to implement a hazardous waste activity fee structure and invoice generators based on the management method they have chosen for their hazardous wastes. In this way, DEQ can encourage environmentally sound management methods, such as recycling, while discouraging less environmentally sustainable practices, such as landfilling. The report data also helps DEQ understand waste flow trends between Oregon, other states, and other countries.

Registered very small quantity generators are required to report changes

VSQGs with a RCRA Site ID Number are not required to submit an annual report but are required to submit a Site ID Notification form when there is a change in generator status or site contact information.

Annual report hotline

For questions about the annual hazardous waste report or RCRA Site Identification Numbers, visit DEQ's [reporting web page](#), call 1-844-841-4938, or email hazwaste@deq.oregon.gov.

Toxic use and hazardous waste reduction requirements for small quantity generators

Overview

In 1989, Oregon became one of two states to mandate pollution prevention planning with the passage of the landmark Toxics Use Reduction and Hazardous Waste Reduction Act. The Oregon Legislature unanimously passed the law and again passed an extensively revised version in 2005. Both times, the Legislature declared the two best ways for businesses to reduce toxic chemical use and hazardous waste generation in the workplace are to:

1. Require affected businesses to develop a plan and report on the steps taken to reduce toxics and hazardous wastes.
2. Ensure DEQ offers free technical assistance services to all businesses.

Program requirements

- **Planning:** Develop a reduction plan, an ISO 14001, or equivalent environmental management system. The environmental management system does not need an International Organization of Standardization certification.
- **Notification:** Electronically notify DEQ after developing a reduction plan or environmental management system.
- **Reporting:** Electronically submit two implementation summaries.
- **Maintaining:** Keep the reduction plan or environmental management system on-site and up to date.

Technical assistance

Free, non-regulatory technical assistance services are available upon request by contacting a local DEQ office or visiting the website <https://www.oregon.gov/deq/hazards-and-cleanup/hw/pages/technical-assistance.aspx>.

Enforcement

Recognizing that sensitive technical information is crucial to many businesses, the information contained in the plan or system is exempt from public disclosure under public records law (ORS 192.355). However, DEQ will post all implementation summaries online. DEQ staff may review a plan, environmental management system or implementation summary. If a DEQ inspector finds the plan, system, or implementation summary inadequate and the business fails to correct the deficiencies, DEQ may assess a maximum penalty of \$500 per day.

Recordkeeping requirements

Retain the following records indefinitely or for the minimum period indicated.

- **Hazardous waste determination documentation:** Maintain records supporting all hazardous and non-hazardous waste determinations. Maintain records for at least three years from the date the waste was last sent for on-site or off-site treatment, storage, or disposal. If you determine that your waste is excluded or exempted as a solid or hazardous waste, you must document that exemption or exclusion in your files and share it with DEQ if requested. Refer to 40 CFR 261.2(f), 262.11(f), and 268.7(a)(7) for more information.
- **Site Identification Number:** Annual updates are required. OAR 340-102-0018
- **Modified Contingency Plan:** On-site at all times and kept current, 40 CFR 265.51
- **Personnel Training Plan:** Small quantity generators do not require a plan. However, the generator must ensure all employees know proper waste handling and emergency procedures relevant to their responsibilities during normal facility operations and emergencies. 40 CFR 262.16(b)(9)
- **Manifests:** Kept on-site for three years. 40 CFR 262.40(a)
- **Exception Reports:** Kept on-site for three years. 40 CFR 262.42(b)
- **Toxics Use Reduction Plan:** DEQ recommends keeping these records on-site for three years. OAR 340-135-0050(2)
- **Toxic Use Reduction Reporting:** LQGs, SQGs and facilities required to report under the Superfund Amendments and Reauthorization Act Title III, also called SARA, Section 313, i.e., the Toxics Release Inventory, report annually. OAR 340-135-0030
- **Land Disposal Restrictions Paperwork:** Generators must retain all LDR supporting data used in their files for three years after the last shipment of the waste was sent for either on-site or off-site treatment, including waste analysis data, notifications, certifications, and any other pertinent documentation. 40 CFR 268.7(a)(6)-(8)
- **Annual Hazardous Waste Reports:** Must be kept on-site for three years. OAR 340-102-0040

Chapter 12

Federal and state definitions

A spill or release means the discharge, deposit, injection, dumping, spilling, emitting, releasing, leaking, or placing of any oil or hazardous material into the air or into or on any land or waters of the state. A threatened spill or release means oil or hazardous material is likely to escape or be carried into the air or into or on any land or waters of the state. Waters of the State include lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean territorial limits of Oregon, all bodies of surface and underground waters, natural or artificial, inland, or coastal, fresh, or salt, public, or private which are wholly or partially within or bordering the state or within its jurisdiction.

Refer to OAR 340-142-0005(24), -0005(25) & -0005(27).

Spill reporting and cleanup

Proper management of hazardous waste will significantly reduce the chance of a spill. However, you must know what to do if a spill happens.

In the event of a spill, threatened spill, or release of oil or hazardous material, the owner or person having control or main point of contact shall take the following actions, as appropriate:

- Immediately implement the site's Spill Prevention, Control, and Countermeasure Plan, contingency plan and emergency procedures. If no plan exists, immediately take the following actions:
 1. Activate alarms or warn persons in the immediate area.
 2. Undertake every reasonable method to stop the spill and contain the oil or hazardous material.
- In the case of a medical emergency or public safety hazard, notify local emergency responders (fire department, ambulance, etc.) using 911 or other means.
- Arrange for properly trained and equipped personnel or contractors to stop and manage the spill if the actions are beyond the ability of the responsible person's on-site representatives, or the responsible person's own response services will be delayed in arriving.
- If the amount of oil or hazardous material exceeds the reportable quantity in any 24-hour period, report the spill or release to the Oregon Emergency Response System, known as OERS, and the National Response Center, known as NRC.

Federal and state laws

A spill or release may also require reporting under several federal and state laws, including:

- Resource Conservation and Recovery Act – RCRA
- Toxic Substances Control Act -TSCA
- Hazardous Materials Transportation Act – HMTA
- Clean Water Act – CWA
- Comprehensive Environmental Response Compensation and Liability Act – CERCLA
- Emergency Planning and Community Right-to-Know Act – EPCRA
- Superfund Amendment Reauthorization Act Title III – SARA
- Oregon Spill Reporting: [OAR 340 Division 142](#)

When to report?

Immediately report the spill or threatened spill to OERS after the completion of the emergency actions, providing all the requested information, when the spill or threat of a spill includes:

- Any amount of oil to waters of the state
- Oil spills on land over 42 gallons
- Spills of hazardous materials that are equal to, or greater than, the quantity listed in the Code of Federal Regulations, 40 CFR 302 (List of Substances and Reportable Quantities)

Telephone reports to NRC and OERS are also required when an emergency involving hazardous material results in the following:

- Death
- Hospitalization
- Property damage above \$50,000
- Any situation a business thinks should be reported

Report contact information

National Response Center

- 1-800-424-8802

Oregon Emergency Response System

- In-State: 1-800-452-0311
- Out-of-State: 503-378-6377

Oregon reportable quantity

Reportable quantity as defined in OAR 340-142-0050:

(1) Spills and releases, or threatened spills or releases of oil or hazardous materials as defined by OAR 340-142-0005(9) in quantities equal to or greater than the following amounts must be reported

- a) Any quantity of radioactive material or radioactive waste
- b) If spilled or discharged into waters of the state or in a location from which it is likely to escape into waters of the state, any quantity of oil that would produce a visible film, sheen, oily slick, oily solids, or coat aquatic life, habitat, or property with oil, but excluding normal discharges from properly operating marine engines
- c) If spilled on the surface of the land and not likely to escape into the waters of the state, any quantity of oil over one barrel (42 gallons)
- d) An amount equal to or greater than the quantity listed in 40 CFR Part 302– Table 302.4 (List of Hazardous Substances and Reportable Quantities) and amendments adopted before July 1, 2002
- e) Ten pounds or more of a hazardous material not otherwise listed as having a different reportable quantity by the Department or the United States Environmental Protection Agency on the list of hazardous substances in 40 CFR 302.4
- f) Any quantity of chemical agent (such as nerve agents GB or VX, blister agent HD, etc.
- g) Two hundred pounds (25 gallons) of pesticide residue;
- h) Any quantity of a material regulated as a Chemical Agent under ORS 465.550
- i) Any quantity of a material used as a weapon of mass destruction or biological weapon
- j) One pound (1 cup) or more of dry-cleaning solvent, including perchloroethylene, spilled or released outside the designed containment by a dry-cleaning facility regulated under ORS 465.505(4).

Some oil and hazardous material spills will require a separate notification to NRC. Visit EPA's Emergency Response – National Response System website for more details. When in doubt, report, as NRC will inform the caller if the incident does not merit reporting. Not reporting an incident could result in a \$10,000 fine, one year in jail, or both. When reporting a spill, be prepared to provide the following information:

- Name, address, and, if assigned, the DEQ/EPA Identification number of the facility
- Date, time, location, and type of incident (e.g., spill or fire)
- Quantity and type of hazardous material, hazardous substance or hazardous waste involved in the incident, along with its properties such as if concentrated, liquid, powder
- Who spilled the material
- Any resource damages such as dead fish or oiled birds
- The extent of any injuries
- Estimated quantity and disposition of any recovered materials
- Who is reporting the spill and their contact information

All hazardous wastes are hazardous substances, but not all hazardous substances are hazardous waste. When in doubt whether to report a spill or release, always report the incident to the Oregon Emergency Response System.

Cleanup

The responsibility for cleanup lies with the person who spills the material and who owns or has authority over the oil or hazardous material. Oregon requires the responsible person or liable party of the spill, release or threatened spill or release to immediately clean up all spills, regardless of the quantity involved. There may be a need to hire a qualified contractor or properly trained and equipped personnel to respond immediately to the spill. If a generator fails to clean up its spill, DEQ may clean it up and, as allowed by law, issue a fine for up to three times the cost of the cleanup, in addition to the actual cost of the cleanup OAR 340-142.

Depending on the type and quantity of material spilled and the potential threat to people or the environment, DEQ may choose to oversee the cleanup or evaluate the action taken and could require additional action to complete the cleanup and disposal. This oversight may take the form of DEQ staff at the scene, phone contact, document review or a combination of these activities. The liable party is accountable for these oversight costs. DEQ normally bills the responsible parties within 45 days.

For more information, contact DEQ's Environmental Cleanup Program to ensure cleanup meets state requirements at 1-800-452-4011.

Note: A hazardous waste determination must be conducted on any cleanup debris, including contaminated soil, water, or groundwater. If the cleanup debris is hazardous waste, manage it accordingly.

Cleanup report

Depending on the type of release and or quantities, DEQ may require the responsible party to submit a written report to DEQ describing all aspects of the incident and steps taken to prevent a recurrence. Refer to OAR 340-142-0090.

Chapter 13

Tips for staying out of trouble

Hazardous waste management is complex. Below are tips to help ensure that you are maintaining compliance.

- The best way to manage hazardous waste is not to generate it in the first place.
- Implement pollution prevention measures.
- Observe the waste management hierarchy: reduce, reuse, recycle, and disposal.
- Maintain good housekeeping. Immediately clean up any spills or releases.
- Do not dispose of solid or hazardous waste anywhere other than a permitted, designated, or authorized facility.
- Never manage hazardous waste:
 - In piles
 - In lined or unlined ponds called surface impoundments
 - By burning
 - By disposing of it in the trash
 - By disposing of it in a storm drain or septic system
 - By pouring it down the sanitary sewer without treatment or first notifying the sewerage agency
 - In tanks, unless complying with 40 CFR 265 Subpart J requirements or the tank is exempt from regulation, for example, RCRA-exempt wastewater treatment unit tanks
- When your facility is being inspected, cooperate fully. Be ready with well-organized files. Be honest and forthright. Ask clarifying questions.
- Know your limits. Small problems can become large problems when well-meaning folks lack the needed expertise.
- Locate and become familiar with your resources ahead of time, for example, by contacting DEQ for a technical assistance site visit.

Container storage

- Store hazardous waste on an impermeable surface with proper secondary containment. Unsealed concrete is permeable, meaning liquid can travel through it. Inspect often for cracks. Don't store hazardous waste containers on dirt or gravel; these surfaces are permeable.
- Where possible, store hazardous waste in a covered area.
- Keep empty containers closed and stored on their sides to prevent rainwater from filling the container.
- Keep full containers upright and closed.
- Label all containers, whether product or waste, empty or full.
- Store ignitable and reactive waste containers at least 50 feet from the property line unless you have obtained a waiver and can provide that waiver to DEQ upon request.

- Consult the local fire marshal to determine local standards for storing flammables.
- Plan ahead when addressing a potential storage time problem; 180 days can go by quickly.
- Segregate wastes and never mix hazardous wastes with non-hazardous wastes.
- Immediately clean up spills or releases of hazardous waste or hazardous substances.
- Inspect containers regularly. Preferably daily, at least weekly.

Inspections/recordkeeping

- Conduct a facility walk-through at least monthly. Ensure staff are trained and confident in their duties. Confirm all containers are properly labeled and closed.
- Keep records of all inspections, including hazardous waste storage areas, satellite accumulation, etc. Records should include what was inspected, the findings, the date, and the inspector's name.
- Keep accurate records. Organize and document routine handling of hazardous waste and substances to save time and money.
- Keep written records of waste determination for all waste streams (laboratory data, SDSs, memos, etc.) and legitimate recycling criteria documentation.
- State and federal regulations require most records to be kept for only three years. However, DEQ recommends generators retain waste management and hazardous substance records for the facility's life. Such documents could limit future liability during cleanup or emergencies.

Contingency plan/personnel training

- Prepare a written contingency plan following 40 CFR 265 Subpart D, which addresses specific emergency procedures, arrangements made with local authorities and emergency response contractors, personnel in charge (emergency coordinator), equipment available on-site and evacuation routes.
- Train personnel to implement the contingency plan.
- Train employees to follow proper handling procedures and emphasize their importance.

Glossary of terms

This is not an exhaustive list of terms related to hazardous waste management or RCRA. Rather, the purpose of this glossary is to define terms used in this document.

- For Oregon hazardous waste definitions, refer to [OAR 340-100-0010](#)
- For EPA hazardous waste definitions, refer to [40 CFR §§ 260.10](#), [261.1\(c\)](#) and [261.2](#).

Accumulation timeframe: The amount of time a generator may accumulate hazardous waste before shipping it off-site. Waste may not be accumulated in surface impoundments, including ponds and piles.

- Large quantity generators may accumulate waste for up to 90 days before shipping off-site.
- Small quantity generators may accumulate waste for up to 180 days before shipping off-site. If the treatment, storage, disposal, or recycling facility is more than 200 miles away, the accumulation timeframe is extended to 270 days.

Acute hazardous waste: P-listed wastes are found in 40 CFR 261.33(e). These wastes are acutely toxic. Generation or storage of more than 2.2 pounds of these wastes makes a generator a large quantity generator.

Annual hazardous waste reports: Annual information submitted by all small and large quantity hazardous waste generators, as well as TSDFs, off-site recycling facilities and sites with approved episodic generation events, that verifies generator category and reports on hazardous waste activities. This report covers activities of the previous calendar year and is due March 1. The report includes both on-site and off-site hazardous waste management activities.

CAS number: Chemical abstract service number. Identifies toxic substances by a unique number.

CERCLA: Comprehensive Environmental Response, Compensation and Liability Act, also known as Superfund.

CFR: Code of Federal Regulations. In the law of the United States is the classification of the general and permanent regulations adopted by the executive departments and agencies of the federal government. The CFR is divided into 50 titles that represent broad areas subject to federal regulation. Title 40: Protection of Environment is the section of the CFR that deals with EPA's mission of protecting human health and the environment under the Resource Conservation and Recovery Act, RCRA.

Closed-loop recycling system: A production system in which secondary materials are reclaimed, returned to, and reused in the original production process or processes from which they were generated. Under the closed-loop recycling exclusion in 40 CFR 261.4(a)(8), secondary materials that are reclaimed and returned to the original process or processes in which they were generated are excluded from regulation under RCRA, provided they are reused in the production process, and the criteria in 40 CFR 261.4(a)(8) are met:

1. Only tank storage is involved, and the entire process through completion of reclamation is closed by being entirely connected with pipes or other comparable means of conveyance;
2. Reclamation does not involve controlled flame combustion (such as occurs in boilers, industrial furnaces, or incinerators);
3. The secondary materials are never accumulated in such tanks for over twelve (12) months without being reclaimed; and,
4. The reclaimed material is not used to produce a fuel, or used to produce products that are used in a manner constituting disposal.

Very small quantity generator: Refer to definition of generator status.

Container: Any portable device, in which a material is stored, transported, treated, disposed of, or otherwise handled.

DEQ: Oregon Department of Environmental Quality.

DEQ/EPA/Site Identification Number: The number assigned by EPA or DEQ to each generator, transporter, and treatment, storage, and disposal facility. This ID number begins with "OR" and is followed by a letter and 9 digits.

Designated DEQ/EPA facility: A hazardous waste treatment, storage, or disposal facility which:

1. Has received a permit (or interim status) in accordance with 40 CFR 270 & 124;
2. Has received a permit or interim status from an authorized state in accordance with 40 CFR 271;
3. Is regulated under 40 CFR 261.6(c)(2); or subpart F of 40 CFR 270 and;
4. Has been designated on a manifest by the generator.

Designated recycling facility: A facility that is designated on a manifest by a hazardous waste generator, and that recycles hazardous waste received from off-site, in units that are exempt from the requirements to obtain a RCRA permit for the management of hazardous waste.

Disposal: The discharge, deposit, injection, dumping, spilling, leaking, or placing of any hazardous waste or hazardous substance into or on any land or water so that the hazardous waste or hazardous substance or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters of the state.

Electronic manifest or e-Manifest: The electronic format of the hazardous waste manifest that is obtained from EPA's national e-Manifest system and transmitted electronically to the system, and that is the legal equivalent of EPA Forms 8700-22 (Manifest) and 8700-22A (Continuation Sheet).

Electronic Manifest System or e-Manifest System: EPA's national information technology system through which the electronic manifest may be obtained, completed, transmitted, and distributed to users of the electronic manifest and to regulatory agencies.

Empty Container: A container in which:

1. All the contents have been removed that can be removed using the practices commonly employed to remove materials from that type of container; and
2. No more than one inch of residue remains on the bottom of the container; or
3. No more than three percent of the total capacity of the container remains in the container if the container is less than or equal to 110 gallons in size; or
4. No more than 0.3% of the total capacity of the container remains in the container or inner liner if the container is greater than 110 gallons in size; or
5. If the material is a compressed gas, the pressure in the container is atmospheric.

For the complete definition, refer to OAR 340-100-0010 and 40 CFR 261.7.

If the container held an acute hazardous waste, to be considered “empty,” the container must also be triple rinsed with a solvent capable of removing the acute hazardous waste. If a container held pesticides (any kind of “-cide”) to be considered “empty,” and not a hazardous waste, it must be decontaminated according to OAR 340, Division 109.

EPA: United States Environmental Protection Agency, an agency of the federal government.

Facility: All contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste, or for managing hazardous secondary materials prior to reclamation. A facility may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments, or combinations of them). Refer to 40 CFR 260.10 for the complete definition.

FIFRA: Federal Insecticide, Fungicide and Rodenticide Act.

Generator: A person who, by virtue of ownership, management, or control, is responsible for causing or allowing to be caused the creation of hazardous waste.

Generator status: There are three categories (status) of hazardous waste generators. Each category has different regulatory requirements.

Halogenated solvents: Solvent containing any of a group of five chemically related nonmetallic elements, including fluorine, chlorine, bromine, iodine, and astatine.

Hazardous Secondary Material: Also called HSM, means a secondary material (e.g., spent material, by-product, or sludge) that, when discarded, would be identified as hazardous waste under 40 CFR part 261.

Hazardous secondary material generator: Any person whose act or process produces hazardous secondary materials at the generating facility. For the purposes of this definition, “generating facility” means all contiguous property owned, leased, or otherwise controlled by the hazardous secondary material generator. A facility that collects hazardous secondary materials from other persons is not the hazardous secondary material generator.

Hazardous waste: A hazardous waste as defined in 40 CFR 261.3 and OAR 340-101-0033.

Hazardous waste generator fee: Refers to an annual fee that each person generating more than 220 pounds of hazardous waste in a month is subject to. Hazardous waste generator fees have two components: an annual activity verification fee and a hazardous waste generation and management fee. Both are combined to represent a “total fee” on hazardous waste invoices issued by DEQ. For further discussion, refer to OAR 340-102-0065.

Hazardous waste minimization: The reduction, to the extent feasible, of hazardous waste that is generated or subsequently treated, stored, or disposed of. It includes any source reduction or recycling activity undertaken by a generator that results in:

1. The reduction of total volume or quantity of hazardous waste;
2. The reduction of toxicity of hazardous waste; or
3. Both, as long as the reduction is consistent with the goal of minimizing present and future threats to human health and the environment.

Large quantity generator or LQG: Refer to generator status for definition.

Large toxics user or LTU: A facility that is required to file a Form 313 under SARA Title III.

LDR: Land disposal restrictions. This program ensures that wastes are properly treated prior to disposal. EPA specifies concentration levels or methods of treatment for hazardous constituents (i.e., treatment standards) to meet before land disposal such as in a landfill. Refer to 40 CFR Part 268.

Management: The treatment, storage, disposal, or recycling of hazardous waste.

Management facility: A facility that treats, stores, disposes of, or recycles hazardous waste.

Manifest: The shipping document, EPA form 8700-22 and, if necessary, EPA form 8700-22A, originated and signed by the generator. CFR Part 262 Subpart B.

Safety data sheet or SDS: Manufacturers are required by law to provide safety data sheets on all products they manufacture and sell. These data sheets provide information on the physical, chemical, and toxic properties of a product.

Mixed radioactive waste: A radioactive waste, as defined by the Atomic Energy Act, which is mixed with a RCRA hazardous waste. This waste is regulated under RCRA as well as the Nuclear Regulatory Act and must be reported.

NPDES: National Pollutant Discharge Elimination System is a provision of the Clean Water Act that prohibits the discharge of pollutants into waters of the United States unless a special permit is issued by EPA, a state, or tribal government.

OAR: Oregon Administrative Rules.

ORS: Oregon Revised Statutes.

Off-site: Any site away from the facility.

On-site: The same or geographically contiguous property which may be divided by public or private right-of-way provided the entrance and exit between the properties are at a crossroad intersection, and access is by crossing as opposed to going along the right-of-way. Non-contiguous properties owned by the same person but connected by a right-of-way that the owner controls and to which the public does not have access are considered on-site property.

Open-loop recycling system: A recycling system that does not meet the criteria for “closed-loop recycling” and usually involves batch rather than continuous recycling.

Operator: The person responsible for the overall operation of a process or facility.

Oregon hazardous waste regulations: Administrative rules governing the generation, management, and disposal of hazardous wastes in the state of Oregon. The majority of federal hazardous waste rules are incorporated at Oregon Administrative Rule Chapter 340, Division 100. Where state hazardous waste regulations and federal regulations do not match, state regulations take precedence. See also Oregon Revised Statutes Chapters 465 and 466.

Owner: The person who owns the facility or part of the facility.

Pesticide residue: A hazardous waste that is generated from pesticide operations and pesticide management, such as from pesticide use (except household use), manufacturing, repackaging, formulation, bulking and mixing, and spills. Pesticide residue includes but is not limited to, unused commercial pesticides, tank or container bottoms or sludges, pesticide spray mixture, container rinsings and pesticide equipment washings, and substances generated from pesticide treatment, recycling, disposal and rinsing spray and pesticide equipment. Pesticide residue does not include pesticide-containing materials that are used according to label instructions, and substances such as, but not limited to treated soil, treated wood, foodstuff, water, vegetation, and treated seeds where pesticides were applied according to label instructions. Refer to OAR 340-100-0010, OAR 340-101-0033, OAR 340-101-0040, OAR 340-109-0010 and 40 CFR 273.9.

Pollution Prevention: Any activity that reduces or eliminates the creation of pollutants or waste at the source. Pollution prevention can be achieved by:

- Protecting natural resources through conservation and improved management practices.
- Increasing efficiency in the use of raw materials, energy, water, or other resources, or
- Source reduction and other practices which reduce the amount or use of hazardous substances, pollutants, or contaminants that enter any waste stream or are released into the environment prior to recycling, treatment, or disposal. Source reduction includes but is not limited to, improved operating practices, process or equipment changes, input material changes, or product reformulation.

Publicly owned treatment works or POTW: Wastewater treatment works, usually designed to treat domestic wastewaters, owned by a state, unit of local government, or Indian Tribe.

Resource Conservation Recovery Act or RCRA: The public law that creates the framework for the proper management of hazardous and non-hazardous solid waste. The law describes the waste management program mandated by Congress that gave EPA authority to develop the

RCRA program. The term RCRA is often used interchangeably to refer to the law, regulations and EPA policy and guidance.

Reclamation: A process to recover a usable product or to regenerate a usable material. Examples are lead recovery from spent batteries and regeneration of spent solvents. Refer to 40 CFR 261.1(c)(4).

Recycling: The use, reuse, or reclamation of waste material. Refer to 40 CFR 261.2.

SARA: Superfund Amendments and Reauthorization Act of 1986.

Site: The land or water area where any facility or activity is located or conducted, including adjacent land used in connection with the facility or activity.

Small quantity generator or SQG: Refer to the definition of generator status.

Solid waste: Any discarded material. A discarded material is any material - solid, liquid, or contained gas - which is abandoned, disposed of, burned, incinerated, recycled, considered inherently waste-like or a military munition. Any material that is not a product may be defined as solid waste. The definition of solid waste is in 40 CFR 261.2.

Solid/sludge residual: Any solid or semi-solid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treatment effluent from a wastewater treatment plant. Refer to 40 CFR 261.2.

Source reduction: The reduction or elimination of waste at the source of generation, usually within a process. Source reduction activities include process modifications, feedstock substitutions, improvements in feedstock purity, housekeeping and management practices, increases in the efficiency of machinery, and recycling within a process. Source reduction implies any action that reduces the toxicity or the amount of waste exiting a process.

State-only hazardous waste: A waste defined as hazardous in the State of Oregon and which are not considered hazardous at the federal level. These wastes are designated in [OAR 340-101-0033](#).

Storage: The holding of hazardous waste temporarily at the end of which the hazardous waste is treated, disposed of, or stored elsewhere. Refer to 40 CFR 260.10.

Superfund: Also known as CERCLA, Congress enacted the Comprehensive Environmental Response, Compensation and Liability Act in 1980.

System: A process or series of processes performing a single operation on a hazardous waste stream. It may consist of several units or a single piece of equipment. Examples include individual tanks, surface impoundments, or distillation systems.

Tank: A stationary device designed to contain an accumulation of hazardous waste that is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) which provide structural support. Refer to 40 CFR 265 Subpart J.

TCLP: Toxic Characteristic Leaching Procedure, SW-846 Test Method 1311, is an analytic test that simulates the acidic leachate of a solid waste landfill and its ability to leach toxic constituents into the groundwater.

Toxics use: Use or production of a toxic substance.

Toxics Use Reduction: In-plant changes in production or other processes or operations, products or raw materials that reduce, avoid, or eliminate the use or production of toxic substances without creating substantial new risks to public health, safety, and the environment. Reduction may be proportional to increases or decreases in production or other business changes.

Reduction means the application of any of the following techniques:

1. Input substitution, by replacing a toxic substance or raw material used in a production or other process or operation with a nontoxic or less toxic substance;
2. Product reformulation, by substituting for an existing end product, an end product that is non-toxic or less toxic upon use, release, or disposal;
3. Production or other process or operation modernization by upgrading or replacing existing equipment and methods with other equipment and methods;
4. Production or other process or operation redesign or modifications;
5. Improved operation and maintenance of production processes or equipment or methods, and modifications or additions to existing equipment or methods, including techniques such as improved housekeeping practices, system adjustments, product and process inspections, or production or process changes; or,
6. Recycling, reuse, or extended use of toxics by using equipment or methods that become an integral part of the production or other process or operation of concern, including but not limited to filtration and other methods.

TUR: Toxic use reduction.

Transporter: A person engaged in the off-site transportation of hazardous waste by air, rail, highway, or water.

Treatment: Any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste to:

1. Neutralize such waste
2. Recover energy or material resources from the waste
3. Render such waste non-hazardous or less hazardous
4. Make it safer for transport, storage, or disposal
5. Make it amenable for recovery, amenable for storage, or reduce its volume

Refer to 40 CFR 260.10.

TSCA: The Toxic Substances Control Act is a United States law, passed by Congress in 1976 and administered EPA, that regulates chemicals not regulated by other U.S. federal statutes, including chemicals already in commerce and the introduction of new chemicals.

TSDF: A permitted facility for treating, storing, or disposing hazardous waste.

Universal Waste: A hazardous waste produced by various businesses and institutions. The five types of universal wastes are:

- Batteries
- Pesticides. Remember, Oregon-only rules govern pesticide management and disposal.
- Mercury-containing equipment
- Lamps
- Aerosol cans

Refer to 40 CFR part 273 for full regulations.

Used or Reused: A material that is:

1. Employed as an ingredient (including use as an intermediate) in an industrial process to make a product. For example, distillation bottoms from one process are used as feedstock in another process. However, a material will not satisfy this condition if distinct components of the material are recovered as separate end products, such as when metals are recovered from metal-containing secondary materials.
2. Employed in a particular function or application as an effective substitute for a commercial product. Example - spent pickle liquor used as a phosphorous precipitant and sludge conditioner in wastewater treatment.

Refer to 40 CFR 261.2.

Used Oil: Used oil is any oil that has been refined from crude or synthetic oil and used as a:

- lubricant
- electrical insulation oil
- hydraulic fluid
- heat transfer oil
- brake fluid
- refrigeration oil
- grease machine
- cutting oil

Used oil does not include:

- Used oil mixed with hazardous waste except for specific instances.
- Petroleum and synthetic-based products used as solvents.
- Antifreeze.
- Wastewaters from which the oil has been removed.
- Oil contaminated media or debris.

Note: Refer to 40 CFR part 279 and OAR Chapter 340 Division 111 for full regulations.

Waste Management Unit: A contiguous area of land on or in which waste is placed. It is the largest area in which there is a significant likelihood of mixing of waste constituents in the same area, usually because each waste management unit is subject to a uniform set of management practices (e.g., one liner and leachate collection and removal system). The provisions in OAR Chapter 340 Division 104 (principally the technical standards in Subparts K-N of 40 CFR Part 264) establish requirements that are to be implemented on a unit-by-unit basis.

Waste Minimization: A waste management approach that focuses on reducing the amount and toxicity of waste generated at the source. Waste minimization does not include waste treatment, that is, any process designed to change the physical, chemical, or biological composition of waste streams.

Appendices

EPA hazardous waste codes

Listed waste codes

- F-listed hazardous waste [40 CFR 261.31\(a\)](#)
 - **F001** The following spent halogenated solvents used in degreasing: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, P004, and P005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.
 - **F002** The following spent halogenated solvents: Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2-trichloro-ethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those listed in F001, F004, or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.
 - **F003** The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/ blends containing, before use, only the above spent non-halogenated solvents; and all spent solvent mixtures/ blends containing, before use, one or more of the above non-halogenated solvents, and, a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.
 - **F004** The following spent non-halogenated solvents: Cresols and cresylic acid, and nitrobenzene; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.
 - **F005** The following spent non-halogenated solvents: Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, or F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.
 - **F006** Wastewater treatment sludges from electroplating operations except from the

- following processes: (1) Sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/ stripping associated with tin, zinc, and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.
- **F007** Spent cyanide plating bath solutions from electroplating operations.
 - **F008** Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.
 - **F009** Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.
 - **F010** Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process.
 - **F011** Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations. (R, T).
 - **F012** Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process.
 - **F019** Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion process.
 - **F020** Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol.).
 - **F021** Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol or of intermediates used to produce its derivatives.
 - **F022** Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.
 - **F023** Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tn- and tetrachloro- phenols. (This listing does not include wastes from equipment used only for the production or use of hexachlorophene from highly purified 2,4,5-trichlorophenol.).

- **F024** Process wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes, from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. (Listing does not include wastewaters, wastewater treatment sludges, spent catalysts, and wastes listed in § 261.31 or § 261.32.).
- **F025** Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.
- **F026** Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions.
- **F027** Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing Hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component.).
- **F028** Residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027.
- **F032** Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations (except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with § 261.35 of this chapter or potentially cross-contaminated wastes that are otherwise currently regulated as hazardous wastes (i.e., F034 or F035), and where the generator does not resume or initiate use of chlorophenolic formulations). This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.
- **F034** Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.

- **F035** Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.
 - **F037** Petroleum refinery primary oil/water/solids separation sludge—Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludge generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in § 261.31(b)(2) (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing. This listing does include residuals generated from processing or recycling oil-bearing hazardous secondary materials excluded under § 261.4(a)(12)(i), if those residuals are to be disposed of.
 - **F038** Petroleum refinery secondary (emulsified) oil/water/solids separation sludge— Any sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air flotation (IAF) units, tanks and impoundments, and all sludges generated in DAF units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in § 261.31(b)(2) (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and F037, K048, and K051 wastes are not included in this listing.
 - Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under subpart D of this part. (Leachate resulting from the disposal of one or more of the following EPA Hazardous Wastes and no other Hazardous Wastes retains its EPA Hazardous Waste Number(s): F020, F021, F022, F026, F027, and/or F028.).
- K-listed hazardous waste [40 CFR 261.32](#)
 - P-listed hazardous wastes [40 CFR 261.33\(e\)](#)
 - U-listed wastes [40 CFR 261.33\(f\)](#)

Characteristic waste codes

- D-codes [40 CFR 261.24\(b\)](#)
 - **D001** - Ignitable waste - A liquid with a flashpoint equal to or less than 140° F.
 - **D002** - Corrosive waste - A liquid with a pH of less than or equal to 2 or greater than or equal to 12.5.
 - **D003** - Reactive waste - Reacts violently with water, creates potentially explosive mixtures with water, and generates toxic gases.

| Waste Code | Description | TCLP regulatory level in mg/l |
|------------|------------------------------|-------------------------------|
| D004 | Arsenic | 5 |
| D005 | Barium | 100 |
| D018 | Benzene | 0.5 |
| D006 | Cadmium | 1 |
| D019 | Carbon tetrachloride | 0.5 |
| D020 | Chlordane | 0.03 |
| D021 | Chlorobenzene | 100 |
| D022 | Chloroform | 6 |
| D007 | Chromium | 5 |
| D023 | o-Cresol | 200 |
| D024 | m-Cresol | 200 |
| D025 | p-Cresol | 200 |
| D026 | Cresol | 200 |
| D016 | 2,4-D | 10 |
| D027 | 1,4-Dichlorobenzene | 7.5 |
| D028 | 1,2-Dichloroethane | 0.5 |
| D029 | 1,1-Dichloroethylene | 0.7 |
| Waste Code | Description | TCLP regulatory level in mg/l |
| D030 | 2,4-Dinitrotoluene | 0.13 |
| D012 | Endrin | 0.02 |
| D031 | Heptachlor (and its epoxide) | 0.008 |
| D032 | Hexachlorobenzene | 0.13 |
| D033 | Hexachlorobutadiene | 0.5 |
| D034 | Hexachloroethane | 3 |
| D008 | Lead | 5 |
| D013 | Lindane | 0.4 |
| D009 | Mercury | 0.2 |
| D014 | Methoxychlor | 10 |
| D035 | Methyl ethyl ketone | 200 |
| D036 | Nitrobenzene | 2 |
| D037 | Pentachlorophenol | 100 |
| D038 | Pyridine | 5 |
| D010 | Selenium | 1 |
| D011 | Silver | 5 |
| D039 | Tetrachloroethylene | 0.7 |
| D015 | Toxaphene | 0.5 |
| D040 | Trichloroethylene | 0.5 |
| D041 | 2,4,5-Trichlorophenol | 400 |
| D042 | 2,4,6-Trichlorophenol | 2 |
| D017 | 2,4,5-TP (Silvex) | 1 |
| D043 | Vinyl chloride | 0.2 |

EPA resources

Below are links to additional resources provided by EPA.

- Choosing a Responsible Recycler
 - https://www.epa.gov/sites/default/files/2015-08/documents/responsible-recycler_1.pdf
- e-Manifest
 - <https://www.epa.gov/e-manifest>
- Generator Improvements Rule: Crosswalk of Previous Regulations to Reorganized Regulations
 - https://www.epa.gov/sites/default/files/2021-01/documents/generator_improvements_rule_crosswalk_0.pdf
- Hazardous Waste Basics
 - <https://www.epa.gov/hw/learn-basics-hazardous-waste>
- Hazardous Waste Manifest System
 - <https://www.epa.gov/hwgenerators/hazardous-waste-manifest-system>
- Hazardous Waste Test Methods / SW-846
 - <https://www.epa.gov/hw-sw846>
- Land Disposal Restrictions or LDR
 - <https://www.epa.gov/hw/land-disposal-restrictions-hazardous-waste>
- Legitimate Recycling
 - <https://www.epa.gov/hw/legitimate-hazardous-waste-recycling-versus-sham-recycling>
- National Response Center
 - <https://www.epa.gov/emergency-response/national-response-center>
- RCRA Online
 - <https://rcrapublic.epa.gov/rcraonline/>
- Regulatory Exclusions and Alternative Standards for the Recycling of Materials, Solid Wastes and Hazardous Wastes
 - <https://www.epa.gov/hw/regulatory-exclusions-and-alternative-standards-recycling-materials-solid-wastes-and-hazardous>
- Test Methods for Evaluating Solid Waste: Physical/Chemical Methods Compendium (SW-846)
 - <https://www.epa.gov/hw-sw846/table-contents-test-methods-evaluating-solid-waste-physicalchemical-methods-compendium-sw>
- Universal Waste
 - <https://www.epa.gov/hw/universal-waste>
- Used Oil
 - <https://www.epa.gov/hw/managing-used-oil-answers-frequent-questions-businesses>

DEQ resources

Below are links to additional resources provided by Oregon DEQ.

- Hazardous Waste Homepage
 - <https://www.oregon.gov/deq/hazards-and-cleanup/hw/pages/default.aspx>
- Guidance and fact sheets
 - <https://www.oregon.gov/deq/Hazards-and-Cleanup/hw/Pages/HW-Management.aspx>
- Annual Fees
 - <https://www.oregon.gov/deq/FilterDocs/HWgenfees.pdf>
- Annual Reporting and YDO
 - <https://www.oregon.gov/deq/Hazards-and-Cleanup/hw/pages/HW-reporting.aspx>
- Conducting Contained-In Determinations for Environmental Media
 - <https://www.oregon.gov/deq/Filtered%20Library/IMDEnvMediaContainedinDet.pdf>
- Environmental Cleanup Program
 - <https://www.oregon.gov/deq/hazards-and-cleanup/env-cleanup/Pages/default.aspx>
- Oregon Emergency Response System or OERS
 - <https://www.oregon.gov/oem/emops/pages/oers.aspx>
- Permitting
 - <https://www.oregon.gov/deq/Hazards-and-Cleanup/hw/Pages/hw-permitting.aspx>
- Rules
 - <https://www.oregon.gov/deq/Hazards-and-Cleanup/hw/Pages/HW-Rules.aspx>
- Spill Reporting
 - <https://www.oregon.gov/deq/Hazards-and-Cleanup/er/Pages/How-To-Report-A-Spill.aspx>
- State-only Hazardous Waste Codes
 - <https://www.oregon.gov/deq/FilterDocs/OregonWasteCodes.pdf>
- Technical Assistance
 - <https://www.oregon.gov/deq/Hazards-and-Cleanup/hw/Pages/Technical-Assistance.aspx>
- Training
 - <https://www.oregon.gov/deq/Hazards-and-Cleanup/hw/Pages/HW-Trainings.aspx>

Other resources

Below are links to additional resources provided by private companies.

- BLR Environmental Compliance Tools
 - <https://enviro.blr.com/resources.aspx>
- EnviroStat Sampling Training
 - <http://www.envirostat.org/>
- McCoy and Associates Environmental Compliance Tools
 - <https://www.mccoyseminars.com/tools.cfm>

Comparison of generator requirements

The table below is a general guideline for generators of hazardous waste. Do not use this table alone to determine compliance. The table does not contain all generator requirements.

| Very small quantity generator | Small quantity generator | Large quantity generator |
|--|--|---|
| <ul style="list-style-type: none"> Never generates more than 220 lbs. of hazardous waste in any month. Never accumulates or stores more than 2,200 lbs. of hazardous waste. Never generates or stores more than 2.2 lbs. of acutely hazardous waste(P-listed). | <ul style="list-style-type: none"> Generates more than 220 lbs. but never more than 2,200 lbs. of hazardous waste in any calendar month. Never accumulates or stores more than 13,200 lbs. of hazardous waste. Never generates or stores more than 2.2 lbs. of acutely hazardous waste(P-listed). | <ul style="list-style-type: none"> Generates more than 2,200 lbs. of hazardous waste in any month. Accumulates or stores more than 13,200 lbs. of hazardous waste on site. Generates or accumulates more than 2.2 lbs. of acutely hazardous waste in any month. Generates more than 220 lbs. of debris containing acutely hazardous waste in any month. |
| Generator Requirements | | |
| <ul style="list-style-type: none"> Identify all hazardous wastes. Send hazardous wastes to regulated hazardous waste facility, recycle wastes, or send waste to solid waste management facility. Never accumulate more than 2,200 pounds of hazardous waste on-site at any time. Comply with Oregon Department of Transportation's transport requirements. | <ul style="list-style-type: none"> Identify all hazardous wastes. Obtain DEQ/EPA hazardous waste identification number. Properly package wastes. Properly label and mark waste containers. Accumulate waste on-site for no more than 180 days. Placard waste for shipment. Comply with Oregon Department of Transportation's transport requirements. Use a manifest. Use a registered transporter. Prepare modified contingency plans, emergency procedures and personnel training. Meet preparedness and prevention requirements. Keep records and retain for 3 years Prepare waste reduction plan. Follow Land Disposal Restriction regulations and maintain record for 3 years. Submit annual report to DEQ Pay DEQ generator fees | <ul style="list-style-type: none"> Identify all hazardous wastes. Obtain DEQ/EPA hazardous waste identification number. Properly package wastes. Properly label and make waste containers. Accumulate waste on-site for no more than 90 days. Placard waste for shipment. Comply with Oregon Department of Transportation's transport requirements. Use a manifest. Use a registered transporter. Prepare emergency contingency plans, emergency procedures and personnel training. Meet preparedness and prevention requirements. Keep records and retain for 3 years. Prepare waste reduction plan. Follow Land Disposal Restriction regulations and maintain records for 3 years. Submit annual report to DEQ Pay DEQ generator fees. |

Example Letter to local authorities from an SQG

[40 CFR 265.37](#)

[DATE]

Dear Chief,

As a small quantity generator of hazardous waste, I am required to make arrangements with local and state emergency response teams to help assure proper response in the event of an emergency. Emergency response personnel both state and local (fire, police, ambulance, and hospital) must be made aware of the access to and layout of the facility, properties of the hazardous waste handled at the facility, types of possible injuries, and evacuation routes. This information is to be used by your department to better plan for an emergency response at this facility.

My business specializes in repairing and painting vehicles. I have three employees. The nature of my business requires that I use ignitable and toxic paints and thinners. I use an on-site still to help reduce the volume of hazardous waste required disposal. We generate the following hazardous wastes:

- Waste thinners—ignitable/toxic
- Waste paint/thinners—ignitable and toxic
- Waste strippers—corrosive
- Still bottoms—ignitable/toxic

In the event of a fire, toxic fumes can be released from many of these materials. The dangers associated with these wastes are best described in the Safety Data Sheet for the virgin products. I have attached these SDS's for your records.

I generate approximately 300 pounds of hazardous wastes monthly and store these wastes in an outside fenced and locked storage area on the northwest side of the facility. I routinely store approximately six months generation before shipment off-site.

Attached is our Modified Contingency Plan listing our emergency coordinators who can be reached 24 hours a day in the event of an emergency. The plan includes a map showing work areas, evacuation routes, areas used to account for employees in the event of an evacuation, and entrance roads to the facility.

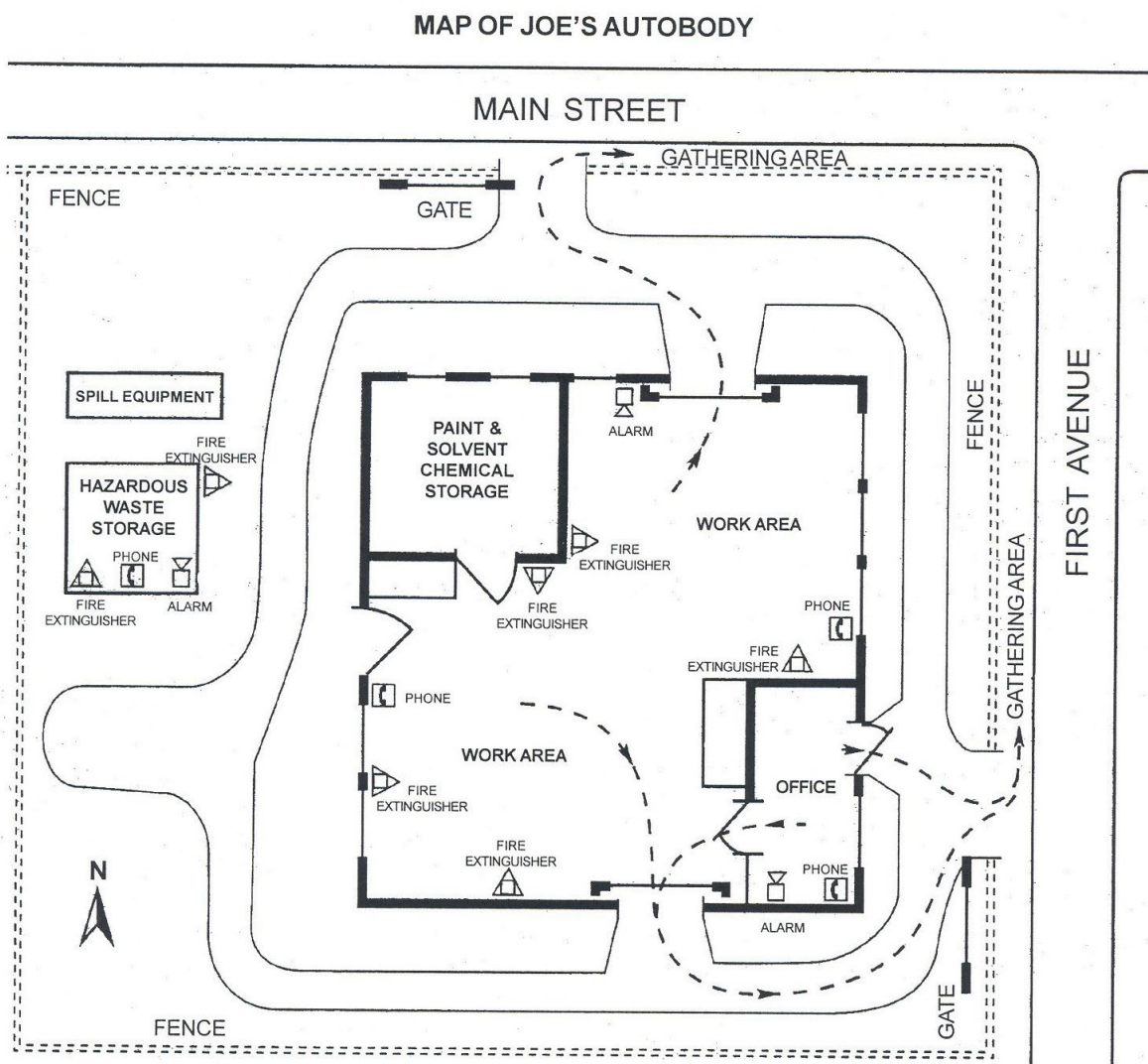
If you have any questions or comments regarding this letter or the Modified Contingency Plan, please call me at (503) 378 -8240.

Sincerely,
Joe

Cc: Fire Department
Hospital
DEQ (regional office)
Enc: Modified Contingency Plan
Map

Example facility map for local authorities from an SQG

This map shows the location of work areas, evacuation routes, gathering areas, hazardous waste storage areas, spill equipment, chemical storage and other information local responders need to know if they had to respond to an emergency. This map is attached to the letter sent to local officials. It is also posted next to the phones along with the —modified contingency planll (next page) so workers know the location of equipment and alarms in the event of an emergency.



Modified SQG contingency plan

Post in hazardous waste central accumulation areas.

| Hazardous waste emergency contacts |
|---|
| Facility address: |
| Emergency coordinator name and phone number: |
| Alternate name and phone number: |
| Fire department phone number: |
| Hospital name and phone number: |
| Police phone number: |
| Fire alarm is located: |
| Spill control equipment is located: |
| Fire extinguishers are located: |
| National Response Center: 1-800-424-8802 Oregon Emergency Response System: In-State: 1-800-452-0311 Out-of-State: 503-378-6377 |